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## A487 New Dyfi Bridge

Environmental Statement  
- Volume 3: Appendix 4.1

Environmental Liasion  
Group Minutes

Final Issue | September 2017



<b>Subject</b>	Environmental Liaison Group (ELG) Meeting No.1	<b>Date</b>	26 November 2014
<b>Project</b>	A487 Dyfi Bridge	<b>Ref</b>	653787
<b>Venue</b>	Welsh Government, Sarn Mynach, Llandudno Junction	<b>Page</b>	1 of 9 Final Issue
<b>Date held</b>	11 November 2014		
<b>Present</b>	James Healey (MJH) Welsh Government (Employer) Julie Hunt (JAH) CH2MHill (Employer's Agent's team) Cathie Holland (CH) CH2MHill (Employer's Agent's team) Ashley Batten (AB) Cadw John Bowers (JB) Snowdonia National Park Authority (SNPA) Glyn Evans (GE) Sustrans Meryl Read (MR) Natural Resources Wales (NRW) Emyr Gareth (EG) NRW Claire Parry (CP) NRW Caroline Wilson (CW) SNPA Jill Jackson (JJ) North and Mid Wales Trunk Road Agency (NMWTRA)		
<b>Apologies</b>	Peris Jones and Len Wyatt, Welsh Government Hannah Powell, Powys County Council Ian Halfpenney, Cadw Rhys Jones, Gwynedd Council Dr. Carol Fielding, NRW		

	<b>Action</b>
<b>1. Introductions and Purpose of the Meeting</b>	
1.1 Introductions were made and JAH noted the following roles: <ul style="list-style-type: none"> <li>• Peris Jones, Project Director, Welsh Government</li> <li>• James Healey, Project Engineer, Welsh Government</li> <li>• Julie Hunt, Consultant Manager, CH2MHILL</li> <li>• Cathie Holland, Environmental Advisor, CH2MHILL</li> </ul>	
1.2 The meeting was held to introduce the A487 Dyfi Bridge scheme to the ELG and to confirm the key environmental issues of the scheme.	
1.3 JAH handed out: <ul style="list-style-type: none"> <li>• A copy of the ELG contacts sheet for checking contact details;</li> <li>• An extract from the WelTAG Planning Stage Report (Table 4.1 and 8.1);</li> <li>• A copy of Option 2.2 drawings 0396/TAR/EVAL-03, 04, 06 and Option 3.1 drawing 0396/TAR/EVAL-07, 08, 09, 10 from the 2003 Technical Appraisal Report prepared by Powys County Council for MWTRA for Welsh Government;</li> <li>• Environmental Designations Context drawing 2010 149/01; and</li> <li>• Scheme Location – Environmental Context drawing 2010 149/02.</li> </ul>	
<b>2. The Need for the Scheme</b>	
2.1 JAH summarised the need for the scheme based on: <ul style="list-style-type: none"> <li>• The A487 at the existing Pont-ar-Ddyfi bridge takes the majority of north/south coastal traffic;</li> <li>• The existing bridge is Grade II* listed and a Scheduled Ancient Monument. It is narrow, has no footways and has substandard height parapets &amp; visibility;</li> <li>• Considerable damage to the existing bridge parapets and spandrel walls;</li> </ul>	

	<b>Action</b>
<ul style="list-style-type: none"> <li>• The Afon Dyfi floods the A487 southern approach to the bridge; and</li> <li>• There is a long diversionary route when the bridge is closed.</li> </ul>	
<b>3. Work Carried out Previously</b>	
<p>3.1 JAH summarised some of the preparatory work carried out prior to 2014:</p> <ul style="list-style-type: none"> <li>• 2003 Technical Appraisal Report (TAR) and Stage II Environmental Assessment;</li> <li>• 2007 Refurbishment Report;</li> <li>• 2010 Options Development Report; and</li> <li>• 2012 WelTAG Planning Stage.</li> </ul> <p>The majority of previous reports were prepared by Powys County Council for MWTRA for Welsh Government. The WelTAG report was produced by Halcrow Group Ltd (now CH2M Hill).</p>	
3.2 Options looked at previously included on-line bridge widening and strengthening, a new bridge adjacent to the existing bridge and new bridges upstream or downstream.	
3.3 At the WelTAG planning stage, a new bridge upstream scored best.	
<b>4. Scheme Objectives and Route Selection</b>	
4.1 In October 2013 an internal instruction was received from the Welsh Government Minister to look for a single option for a new Dyfi Bridge.	
4.2 The Minister requested a route selection based on feedback from the WelTAG planning stage and other consultations. There has not been an announcement of a Preferred Route, i.e. there is no TR111 Preferred Route protected for planning purposes.	
4.3 The WelTAG report in 2012 was planning stage: the ECI contract work (see item 5) will include any further necessary WelTAG appraisal.	
<p>4.4 JAH noted the planning objectives for the scheme, developed in the WelTAG work:</p> <p><b>Transport Planning Objectives</b></p> <hr/> <p><b>TPO1:</b> To improve the reliability of crossing the Afon Dyfi for people, freight and emergency vehicles on A487 strategic corridor</p> <hr/> <p><b>TPO2:</b> To improve efficient and reliable accessibility to key services including employment opportunities, healthcare and education</p> <hr/> <p><b>TPO3:</b> To maintain the role of Machynlleth as a vibrant and sustainable local centre</p> <hr/> <p><b>TPO4:</b> To preserve the long-term integrity of Dyfi Bridge</p> <hr/> <p><b>TPO5:</b> To reduce the number and severity of collisions and casualties on the A487 in the study area</p> <hr/> <p><b>TPO6:</b> To ensure that flood risk to third parties is not increased</p> <hr/> <p><b>TPO7:</b> To minimise the impact of transport improvements on the landscape, biodiversity, water resources and heritage</p> <hr/> <p><b>TPO8:</b> To increase the opportunity for efficient, safe and reliable travel by walking and cycling on the A487 corridor within the study area</p>	
<b>5. Procurement Process and Programme</b>	
5.1 CH2M Hill were appointed in September 2014 by Welsh Government (WG) as the Employer's Agent, for Key Stages (KS) 3 and 4 of the project.	

	<b>Action</b>
5.2 The development of the scheme will be via the Early Contractor Involvement (ECI) process with the appointment of a Contractor and their Designer. The Designer will include a team of engineers and environmental specialists.	
5.3 WG are looking to complete the ECI pre-qualification process and go out to tender in late November 2014. The ECI award will be in March/April 2015.	
5.4 KS3 will cover design development up to Draft Orders and publication of the environmental statement (ES) and assessment of implications on European sites (AIES) and will be just over one year in duration.	
5.5 KS4 covers the statutory process, which includes the local public inquiry should one be required, and is about one year's duration.	
5.6 KS6 covers the detailed design, construction and aftercare phase. The aftercare phase can be from 1 year to 5 years. The detailed design and construction phase is likely to be 1.5-2 years in duration. <b>Post Meeting Note:</b> The start of construction is programmed for late 2016 subject to there being no requirement to hold a Public Inquiry.	
5.7 Key deliverables during KS3, to be prepared by the ECI Contractor's team, will include the Environmental Statement, Draft Orders, the Assessment of Implications on European Sites.	
<b>6. Scheme Description</b>	
6.1 Route options 2.2 and 3.1 are two new upstream bridge options previously considered, with 3.1 preferred by the project team. Option 2.2 crosses the Afon Dyfi approximately 9m above normal river level. Option 3.1 crosses the Afon Dyfi approximately 7m above normal river level (as the existing A487 northern tie in point is lower than the tie in point for Option 2.2).	
6.2 The design, to be carried out by the ECI team, will be to current standards and guidance. It was noted that the existing Pont ar Ddyfi is some 5.6m in width. The new Dyfi Bridge and approach would have a 7.3m carriageway with hard strips. The design speed currently considered is 85kph, which corresponds to a speed limit of 50mph.	
6.3 JAH noted that design work carried out for the 2003 TAR identified that the majority of the new road south of the new river crossing would need to be on viaduct rather than embankment, to meet flood requirements.	
6.4 The current outline designs shows a bridge with a composite steel structure with single piers and an open parapet, piers close to the river but not within it.	
6.5 The current design and cost does not include a designated route for cyclists or pedestrians as there would be provision on the path alongside the Dyfi and the Millennium Bridge or over the existing Pont ar Ddyfi.	
6.6 JAH noted that when making a compulsory purchase using a Compulsory Purchase Order (CPO), mitigation measures remote from the scheme are harder to justify than areas immediately adjacent to the new road.	
<b>7. Environmental Context</b>	
7.1 CH summarised the broader environmental context of the scheme: <ul style="list-style-type: none"> <li>• The scheme for the most part falls within the Snowdonia National Park and all of the Dyfi Biosphere Reserve;</li> <li>• The downstream presence of the Cors Fochno and Dyfi RAMSAR, two Special Areas of Conservation: Lleyn Peninsula and Sarnau SAC, Cors Fochno SAC, a Special Protection Area: the Dyfi Estuary SPA, Dyfi Site of Special Scientific Interest (SSSI), Cors Fochno National Nature Reserve (NNR), Local Nature Reserves; and</li> <li>• Protected Species include otter, badgers, bats, fish.</li> </ul>	

	<b>Action</b>
7.2 The mouth of the Dyfi estuary was noted to be some 15km downstream of the existing bridge and the SSSI and SAC are some 4.5km downstream.	
7.3 Local to the scheme: <ul style="list-style-type: none"> <li>• The scheme falls within Flood Zones: zone 2 and 3</li> <li>• The scheme is within the setting of a Scheduled Ancient Monument – Pont ar Ddyfi and Listed Buildings: Pont ar Ddyfi, Dovey Cottages and others;</li> <li>• The presence of the a Battle Site, Tram Road, Causeway, Round Barrows;</li> <li>• The Machynlleth Conservation Area;</li> <li>• Access includes: NCN 8 and 82, Glyndwr’s Way, Wales Coast Path, Public Footpaths, Woods for People;</li> <li>• Access Land includes: Foel y Ffridd and Pen yr Allt;</li> <li>• Ancient semi-natural woodland; and</li> <li>• Notifiable weed species including Japanese Knotweed and smaller areas of Himalayan Balsam.</li> </ul>	
<b>8. Discussion of Environmental Issues</b>	
8.1 The meeting held a ‘round table’ discussion of the environmental issues with each meeting attendee asked to highlight those points relating to environmental aspects of the scheme which will need to be taken into account by the ECI Contractor.	
8.2 The attendees were asked to identify (to scheme or programme) key environmental requirements, risks, opportunities, constraints, consents, licences, relevant non-statutory organisations and/or interest groups.	
8.3 The points raised at the meeting are provided as a list at the end of the notes of meeting.	
<b>9. Future Meeting Venue</b>	
9.1 Requests were made for the future ELG meetings to be in a location closer to the scheme. Suggestions were: the Old Station at Machynlleth. Meeting rooms at the SNP offices in Penrhyndeudraeth LL48 6LF or Plas Tan y Bwlch, LL41 3YU.	
9.2 Attendees requested that dates of meetings be arranged well in advance to ensure representation from across the different environmental organisations.	
<b>10. Contact Sheet</b>	
10.1 Attendees were asked to review the contact details and return amendments to CH/JAH	All
10.2 JAH advised that during the Tender period attendees’ organisations may be contacted by tenders, and asked if any attendees had any objection to being contacted: all attendees were content with being contacted. JAH asked if attendees could advise of a single point of contact within their organisation for this purpose.	All
<b>11. Date of Next Meeting</b>	
11.1 The next ELG meeting will be arranged by the appointed ECI Contractor in 2015.	

**Author** Catherine Holland

**Copy** *Attendees and:* Peris Jones (PJ), Len Wyatt (LW) - Welsh Government

Matthew Griffiths, (MG) Corderoy

Hannah Powell, Senior Ecologist, Powys County Council;

Ian Halfpenney, Cadw

Dr Carol Fielding, Montgomeryshire Team Leader, Natural Resources Wales

Rhys Jones, Gwynedd Council

## Discussion of Environmental Issues

With reference to item 8 in the notes of meeting, the following is a list of the points raised:

Topic	Description	Raised by
<b>FLOOD ISSUES</b>		
1.	EG query whether a flood modelling exercise should be undertaken <i>before</i> tendering stage so that all the tenderers are aware of the issues. This should improve the quality of tenders by reducing the uncertainty in the design.	NRW (EG)
2.	A flood model will help guide the design of the southern approach road. This will allow different design options to be considered ranging from a viaduct, an embankment or a combination of an embankment and viaduct.	NRW (EG)
3.	Suggest that the 2002 1D modelling work should not be used. Instead, a more accurate/reliable 2D model should be used which better represents flood flow over the floodplain.	NRW (EG)
4.	NRW have a 2D model for work associated with the existing bridge and could make it available to WG. Refer post meeting note below:	NRW (EG)
5.	<p><i>Flood Model Post meeting note:</i></p> <p><i>Capita Symonds produced a TuFLOW model for EA/now NRW in 2011, but unfortunately this model only extends a couple of hundred metres upstream of the old bridge. The model in its current form is therefore not suitable for use in reviewing the impact of either of the two bridge options. The hydrological input enters the model at the upstream boundary, therefore the model does not represent flood flow which would have already overtopped the bank upstream of the Millennium bridge - .... one of the main flow pathways during a flood.</i></p> <p><i>The model would need to be extended some distance upstream – probably upstream of the two Dulas confluences – in order for it to be of any use to WG. Should you wish to obtain the model, please contact</i></p> <p><a href="mailto:accesstoinformationteam@naturalresourceswales.gov.uk">accesstoinformationteam@naturalresourceswales.gov.uk</a>.</p> <p><i>NRW also have a copy of the 2002 model, however, this model is a 1D HEC-RAS model which doesn't represent the floodplain as well as the newer 2D TuFLOW model but suggest that this model is not used to consider the impact of any bridge design.</i></p> <p><i>Advise that more informed tenders if the tenderers better understand the flooding constraints. The only way to do this is to consider the flood risk impact of indicative designs through the use of flood modelling.</i></p>	NRW (EG) email dated 12/11/14
6.	The expectations/requirements in terms of the impact of flooding on third parties is being raised. E.g. upstream backwater has an impact on the industrial estate - TAN15 requirement up to 0.1% plus Climate Change. <b>Post Meeting Note:</b> In Welsh Government's letter to Chief Planning Officers dated January 2014.	NRW (EG)
7.	Flood warnings over the last few years were as follows: 2013-none, 2011-4no., 2009-2no., 2007-4no., Floods generally closed the A487 here twice a year.	NRW (EG)
8.	The Dyfi is an extremely mobile river with erosion and a mobile river channel. Is there a need for upstream river training? Upstream there are locations where the river has moved recently by 10-15m in a year. Aerial photographs, if used, need to be up to date as things can change very quickly – aerial photographs tabled at the meeting may be a few years old.	NRW (EG)
9.	Dyfi Biosphere Reserve Study data should hold a lot of information on the Dyfi. <b>Post Meeting Note:</b> The following information was provided by NMWTRA: <a href="https://www.aber.ac.uk/en/news/archive/2012/04/title-113781-en.html">https://www.aber.ac.uk/en/news/archive/2012/04/title-113781-en.html</a> <a href="http://www.forestry.gov.uk/pdf/Dyfi_Catchment_Research_Forest_brochure_en.pdf/\$FILE/Dyfi_Catchment_Research_Forest_brochure_en.pdf">http://www.forestry.gov.uk/pdf/Dyfi_Catchment_Research_Forest_brochure_en.pdf/\$FILE/Dyfi_Catchment_Research_Forest_brochure_en.pdf</a> <a href="http://www.ecodyfi.org.uk">www.ecodyfi.org.uk</a> ; <a href="http://www.dyfibiosphere.org.uk">www.dyfibiosphere.org.uk</a> Ecodyfi Manager Contact: Andy Rowland 01654 703965 Y Plas, Machynlleth, SY20 8ER	NMWTRA

Topic	Description	Raised by
10.	The existing Pont ar Ddyfi was built in the dry and the river was then moved to flow under the bridge	NRW (EG)
11.	The existing Dyfi Bridge southern approach roadway with its boundaries are a flow constraint – could they be modified to improve flows?	NRW (EG)
12.	With wet marshlands/habitats it is important not to alter the regime, but it was noted that as flooding is periodic so such habitats can't rely on flooding.	SNPA (CW)
13.	Tree and hedge planting often mitigate the landscape issues but may conflict with the flood risks so could affect the design options.	NRW (MR)
14.	The NRW flood gauging station, a critical gauge for flood warnings, is located close to Option 2.2.	NRW (EG)
15.	Flooding under the railway bridge near Machynlleth is a concern and if not addressed defeats the objectives if it prevents access to the new bridge.	NMWTRA
16.	The flooding problem at the railway bridge is a part of a separate scheme which is looking at the Station area. WG are liaising with others on this.	MJH
17.	At the railway bridge is a de-watering/pumping option possible?	
18.	Flood defence consent and an FCA will be a requirement.	NRW (EG)
19.	Drainage: pollution prevention will be a key requirement of the design and construction phase.	NRW
<b>TRAFFIC / ROAD LAYOUT</b>		
20.	The existing bridge is a gateway to the SNP so the landscape assessment and the design of the new bridge are important - site visits will be needed.	NRW
21.	Could route option 2.2 be modified to remove the roundabout?	
22.	What is the existing speed limit for this section of the A487?	
23.	Concern over the proposed speed limit and the speed of traffic travelling into Machynlleth along the new bridge and road.	
24.	Will the old section of the A487 be de-trunked?	
25.	Will the new road be lit? If so concern over the potential impact on protected species, particularly at the river.	
26.	Wider verges make road maintenance easier and safer.	NMWTRA
<b>RIVER &amp; FISH</b>		
27.	Important fishing river for salmon, sea trout, brown trout, lamprey, sea lamprey, eel - pools in the Dyfi are important for fish - timing of works to avoid fish spawning essential.	NRW
28.	Location of new bridge piers needs to be considered with respect to spawning beds.	NRW (MR)
29.	There is a conflict between the seasons for fishing and spawning which would, potentially, only give 4 months for a construction working period.	NRW
30.	Essential to consult with the New Dyfi anglers at the earliest possible opportunity – The New Dyfi Fisheries contact details were passed across to CH2MHILL	NRW
<b>PROTECTED SPECIES &amp; HABITATS</b>		
31.	Will there be a need for 'Bat lights'?	SNPA (JB)
32.	Need to consider: <ul style="list-style-type: none"> <li>• Features of the SAC (Penllyn a'r Sarnau); mobile species - otters, Atlantic salmon, seals, other EPS - Bats, Dormice.</li> <li>• Wildlife and Countryside Act - polecats, reptiles, nesting birds, (records for Ospreys in this area).</li> <li>• Section 42 species, UK BAP species - Minutest Diving Beetle.</li> <li>• Water voles, fisheries, eels and aquatic spp. Barn Owl foraging - increased risk with a road. Great Crested Newts. Don't forget Invertebrates and lower plants</li> </ul>	NMWTRA
33.	DMRB guidance is to include RAMSAR sites as a European Site as per SACs & SPAs (i.e. same process applies)	NMWTRA

Topic	Description	Raised by
34.	<p><i>Great Crested Newts (GCN) Post Meeting Note:</i></p> <p><i>GIS shows that there are BIS records of Great Crested Newts in ponds near the Garth Road on the Bryn-y-Gog Estate, Machynlleth, about 1km from the scheme location and just outside the National Park.</i></p> <p><i>GCN's will be a material consideration if there is suitable GCN habitat present within the scope of the scheme and an appropriate GCN survey confirms their presence within (or close to) the footprint for the scheme.</i></p> <p><i>The proposed Dyfi Bridge Scheme straddles the boundary between Gwynedd and Powys, so it would be worthwhile for an approach to both Cofnod (North Wales Environmental Information Service) and BIS (Biodiversity Information Service for Powys &amp; BBNP) with a view to commissioning data searches as part of the wider scheme scoping exercise.</i></p>	SNPA (CW), NRW (CP) email dated 12 & 13/11 2014
35.	A red data species, also section 42 (Wales) of the NERC Act (2006) is the Minutest Diving Beetle ( <i>Bidessus minutissimus</i> ) which has been found in four Welsh rivers, one being the Dyfi ( <i>Refer Adrain Fowles (CCW) – Found in fine river sands and shingles, vulnerable to pollution and disturbance of sediments.</i>	SNPA (CW)
36.	Important to undertake a Phase 1 - Habitat survey of the wider scheme corridor and a Phase 2 - (NVC) for those plant communities, which are either directly, indirectly and potentially impacted, by the scheme.	SNPA (CW)
37.	EC designated shellfish waters associated with the Aberdyfi and Ynys Las	NRW
38.	Essential that the scope of the ecology work is seen very early in 2015 as there is only one survey season in the programme. Important to include a table of species surveys, season and duration in the ECI tender documents.	NRW SNPA (CW)
39.	Licences for survey work may constrain the programme.	
40.	Following construction need to consider habitat loss and mitigation measures such as translocation.	
<b>CULTURAL HERITAGE</b>		
41.	There is a potential World Heritage Site designation which includes the slate quarrying landscapes of Gwynedd and their industrial transport corridors from Corris to Machynlleth.	Cadw
42.	The setting of the scheduled Ancient Monuments needs to be considered Dyfi Bridge (MG002) and the Round Barrows (ME231) (bronze age feature) which are upstream of the Millennium bridge. In this respect route option 3.1 is better for the Dyfi Bridge whilst route option 2.2 would probably be better for the Round Barrows.	Cadw
43.	Round barrows are not often found on floodplains, as they are usually located on higher ground. There is high potential for archaeological/paleo-environmental remains in their vicinity due to their ritualistic nature - possibly buried artefacts.	Cadw
44.	The future maintenance of the existing Dyfi Bridge is a concern with respect to potential flood damage to the bridge in the longer term and the need to safeguard it as a listed structure and as a transport corridor for people rather than vehicles. As such, who will take responsibility for the existing bridge once it is de-trunked? In the past PCC have repaired the bridge and will have a record of the repairs.	NRW (MR)
45.	Conservation work to the existing Pont ar Ddyfi is not included in the scheme.	WG (MJH)
46.	With reference to the above AB noted that any future Pont ar Ddyfi repairs needed to be more appropriate to the status of the bridge than previous repairs.	Cadw
<b>CONSTRUCTION</b>		
47.	There is a preference for the site compound and areas for temporary works to be included within the CPO due to the sensitive nature of this area within the SNP and the flood risks. The site compound would need to be located outside of the flood plain – limited places where a compound could be located.	SNPA (JB) NRW (EG)



Topic	Description	Raised by
48.	SAM consent would be unlikely be given to locate the site compound in the field with the SAM Round Barrows.	Cadw
49.	During construction, flooding raises a risk to plant, machinery and people and a risk of pollution.	NRW (MR)
50.	Water supply and foul drainage for the compound need to be thought about when deciding upon a compound location.	NRW (MR)
51.	Will there be a demand for fill material? Possible sources with Planning Permission should reduce overall costs.	SNPA (JB)
52.	Japanese knotweed is a contaminated waste material so its treatment will need to be considered. The early treatment of invasive species especially Japanese Knotweed and Himalayan Balsam maybe possible but would require the agreement of the landowner. The treated material would still be waste material until certified as being clean.	NMWTRA SNPA (JB)
53.	Fill material - potential surplus? Possible disposal sites with planning permission should reduce overall costs.	
54.	A soil survey and management strategy should be included on this scheme as a part of the Geotechnical, landscape and ecological surveys. Mitigation required for habitat loss and changes to hydrology (also for the area near the railway).	NMWTRA
<b>Non-Motorised User (NMU)</b>		
55.	A concern over the long term maintenance of the existing Pont ar Ddyfi as this is used as a pedestrian and cycle route.	Sustrans
56.	The Active Travel Act places a duty on LA's and WG to enhance provision for pedestrians and cyclists. Therefore the Active Travel Act needs to be an essential part of the scheme with the cross-section of the road designed to accommodate cyclists and pedestrians.	Sustrans
57.	There is a concern over the impact of a new bridge on the Millennium Bridge if the new bridge deck (option 3.1) is higher and close to it - the Millennium Bridge is a destination in itself.	Sustrans
58.	National Cycle Route No.8 which runs along the south side of the Dyfi, an existing right of way, is not fenced off to allow cattle access to the river. There are also a number of gates across the right of way because of this. Regular cyclists (mainly to the Centre of Alternative Technology) use the A487 as it is a more direct route and with no gates.	Sustrans
59.	Walking and cycling on the new road would be more direct, have an even gradient, be more comfortable with no gates and more convenient for regular use. The existing walking and cycling route involves 5 gates over approximately 600m - landowner will not permit removal, also animal waste on path.	Sustrans
60.	As the areas are unfenced alongside the river cattle would have access to the areas beneath the bridge.	Sustrans
61.	The current A487 Trunk Road, north of the bridge, is below standard - will detrunking improve this section?	Sustrans
62.	<b>Post Meeting Note:</b> A non-motorised user audit is required unless one has already been undertaken. A copy is requested if one has been undertaken.	Sustrans
<b>LICENCES, CONSENTS AND PERMITS</b>		
63.	Assess requirement for licences and consents - ensure timely application, waste import and export, land drainage consent, foul and drinking water, water/river abstraction consent for construction period.	NRW (MR) NRW (EG)
<b>EXISTING DYFI BRIDGE, PONT AR DDYFI</b>		
64.	Who would look after the existing Dyfi Bridge - Gwynedd, Powys or both as the county boundary follows the river.	SNPA (JB)

Topic	Description	Raised by
65.	Pont ar Ddyfi Bridge has concrete strengthening over the arch.	
66.	A conservation management plan for the existing Dyfi Bridge is important.	Cadw
67.	Improve repairs of the existing Dyfi Bridge so that they are more appropriate.	Cadw
68.	Conservation and management of existing bridge which is a scheduled Ancient Monument - Risk or Opportunity?	
<b>LANDSCAPE AND VISUAL IMPACT AND PLANTING</b>		
69.	A landscape architect officer appointment has been made at NRW, so that person will be involved in future.	NRW
70.	In the SNP landscape aspects will ultimately be considered by the SNPA	SNPA (CW)
71.	Light from street lights and their columns, from cars, lorries, and cyclists etc., may have a big landscape impact. Would the bridge need to be lit?	SNPA (JB) NRW
72.	Parapets on a viaduct crossing the floodplain have the potential for significant landscape and visual impact.	SNPA (JB)
73.	Ensure design has soft estate areas which are maintainable and accessible and with appropriate profiles to marry in with the landscape.	NMWTRA
74.	Ensure early procurement and/or contract growing of trees, shrubs, wildflower, grassland, of local provenance (ideally from locally collected source).	NMWTRA
75.	<p><i>SNP Boundary Post Meeting Note:</i></p> <p><i>The SNP boundary follows the Meirionethshire – Montgomeryshire boundary as it was until 1985.</i></p> <p><i>The current Gwynedd - Powys boundary in this area is as shown on the OS maps. The annotated map showing amended 1985 community boundaries states "centre of river".</i></p> <p><i>The National Park Authority is the local planning authority within the national park. Powys and Gwynedd are statutory consultees for planning applications in the National Park within their areas.</i></p>	SNPA (JB) email dated 12/11/2014

Project title	A487 New Dyfi Bridge Scheme	Job number 244562
Meeting name and number	Environmental Liaison Group No. 2	File reference 900237-ARP-ZZ-ZZ-MI-YE-00002
Location	Y Plas, Machynlleth, Powys SY20 8ER	Time and date 10:30 16 September 2015
Purpose of meeting	Introduce the Early Contractor Involvement (ECI) team and discuss environmental process and requirements of the scheme	
Present	Jessica Postance (JP), Arup James Healey (JH), Welsh Government Julie Hunt (JHu), CH2M Pete Wells (PW), Arup Julian Davies (JD), AG Jill Jackson (JJ), NMWTRA Caroline Wilson (CW), SNPA Meryl Read (MR), NRW expert)	Chris Furneaux (CF), Arup Luci Collinwood (LC), WG Cathie Holland (CH), CH2M Angharad Owen (AO), Arup Ashley Batten (AB), Cadw Glyn Evans (GE), Sustrans Emyr Gareth (EG), NRW Paul Blackman (PB), WHS (Flood expert)
Apologies	Len Wyatt, Welsh Government Matthew Griffiths, Corderoy Rhys Jones, GCC Mannon Lewis, NRW Kathryn Roberts, Cadw Suzanne Whiting, Cadw Rachel Price, PCC	Peris Jones, Welsh Government Iwan Evans, SNPA Gwilym Jones, SNPA Clare Parry, NRW Ian Halfpenney, Cadw Anthea Jones, PCC
Circulation	Those present and apologies David Rowlands, AG Sue Williams, NRW Patrick Green, NRW	Richard Bruten, AG John Roberts, SNPA

## Action

### 1. Introduction and Purpose of the Meeting

- 1.1** The meeting began with JP introducing herself as the Environmental Coordinator for the Scheme. The rest of the group made their introductions. JP reported that all the actions from the previous Environmental Liaison Group meeting no.1 held in November 2014, had been completed. Feedback was requested from today's ELG meeting during/following the discussions on the environmental aspects of the scheme.

Prepared by **Jessica Postance**  
 Date of circulation [Click here to enter text.](#)  
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## Action

### 2. The ECI Team, Roles

2.1 JP described the ECI Team and Roles. A slide with the organogram was shown and described the following:

- Client - Welsh Government
- Employer's Agent - CH2M and Corderoy
- Contractor - Alun Griffiths
- Design Consultant - Arup
- Specialist flood advisor - Wallingford HydroSolutions

### 3. Project Background

3.1 JH is the Project Engineer for Welsh Government and is part of the core project team. Peris Jones is the Welsh Government Project Director. JH discussed the project background and issues related to the need for this scheme, including:

- A487 trunk road takes the majority of north/south coastal traffic.
- Afon Dyfi subject to frequent flooding severing the A487 and putting pressure on the existing Pont-ar-Ddyfi bridge structure.
- When the current bridge is out of action, this causes adverse effects on the community. Need for a different route to allow people to attend their appointments at hospital, as Bron Glais in Aberystwyth is located to the South-West of Machynlleth.
- The bridge is narrow, has no footways and has a history of accidents and closures.
- Long diversionary routes.
- The existing Dyfi Bridge is Grade II\* Listed & a Scheduled Ancient Monument which limits the improvement options.

3.2 It was highlighted that the Scheme title is the 'New Dyfi Bridge' to differentiate it from the existing Pont-ar-Ddyfi. JH highlighted the Transport Planning Objectives the Scheme is to address.

### 4. Background to the Process

4.1 LC explained the four strands of the Environmental assessment process in WG:

- Environmental Assessment will use DMRB Volume 11 as guidance
- Environmental Design and Management will use DMRB Volume 10 as guidance.
- Assessment of Implications on European Sites will also use DMRB Vol 11 as guidance
- Environmental Consents and licences – Liaise with ELG

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### 5. Environmental Liaison Group

5.1 LC explained that the purpose of the ELG is to promote active stakeholder engagement. The process creates the opportunity to ask questions and raise concerns and issues at an early stage so that mitigation measures can be incorporated into the design. LC asked for views expressed to be organisational views not personal views. There is a statutory and legal requirement to engage with stakeholders. An improved scheme is therefore possible as a result of the discussions.

### 6. Key Stages and Programme

6.1 CF led a discussion regarding the project programme, including:

- Contract start - July 2015
- Environmental Scoping - current stage
- Optioneering and design development - current stage
- Design freeze - mid November 2015
- Presentation of 1:2500 plans - January 2016
- Publish Environmental Statement, SIAA and draft Orders - June 2016
- Key Stage 4 Statutory Process
- Key Stage 6 detailed design, construction and aftercare period

### 7. Scheme Design

7.1 The project team are keen to work with the ELG to address as many concerns and comments as possible. A high level plan was shown.

7.2 At the previous ELG two routes were shown, options 2.2 and 3.1. Route design is progressing using option 3.1. Option 2.2 provided challenges, such as:

- Roundabout - issues with land take,
- Lighting - visual implications
- Ecology
- Economic impact - slows down traffic and increases journey times

7.3 The Proposed Scheme has a smoother highway alignment which has benefits. Ecology, Landscape, Visual Impact, Archaeology and Flood risk will be addressed. It was noted that there was a slight variation in the bridge to the picture shown in the slides, with respect to the piers of the viaduct across the floodplain and where the bridge crosses the river as there would be longer spans to avoid the river channel.

7.4 Construction Methodology - It is currently proposed to use a push launch method. Firstly, to build the embankment at the southern end, which would act as a platform for pushing out the first part of the structure. This push launch method would minimise the amount of work to be carried out in the flood plain, thereby reducing the risk of flooding during construction.

7.5 Second stage - Build a bridge deck and then push the structure out which has

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environmental benefits reducing the potential impacts upon landscape and ecology.

- 7.6 CW questioned whether there is enough time to do all relevant surveys in time to inform the Environmental Statement (ES) if the ES is due to be published in June 2016.
- 7.7 PW advised that Arup started surveys in July 2015. They will not have completed all the surveys before finalising the ES. Surveys will carry on into June 2016 and a supplementary package reporting the results of these surveys will be published after the ES.

## 8. Environmental Context

8.1 The general environmental context was described by JP, including:

- The Site location and the existing Pont-ar-Ddyfi is a Scheduled Ancient Monument and Grade II\* listed.
- The Snowdonia National Park;
- Two Special Areas of Conservation: Pen Llyn a'r Sarnau / Llyn Peninsula and Sarnau SAC, and Cors Fochno SAC
- A RAMSAR: Cors Fochno and Dyfi RAMSAR
- Dyfi Estuary ~5km downstream is a SSSI and SPA
- The Scheme is within the Dyfi Biosphere Reserve boundary.

8.2 The scoping report includes a map showing the 'Local environmental context'. As this was not available at the time of issue copies were handed out at the meeting.

8.3 GE and CW noted they did not receive the email with the link to the draft scoping report. They were given paper copies during the meeting.

8.4 AB raised the need to include the Cadw data, and update the map. **ACTION:** Arup  
Use Cadw data in the assessment and Scoping report

8.5 AO noted that information has been requested from NRW regarding the 'woods for people' and 'Wales coastal path'.

8.6 JP highlighted there are invasive species within the site boundary which includes Japanese knotweed and Himalayan Balsam.

8.7 The local environmental context was described, including:

- Other archaeological and historic features in the area (Battle Site, Tram Road, Round Burrows, Causeway)
- The northern part of the scheme lies in the Snowdonia National Park
- The route of the proposed scheme crosses Zone C2 of the floodplain of the Afon Dyfi
- Sustrans NCN 8 and 32, Wales Coast Path (Glyndwr's Way, Public Footpaths, Woods for People)
- The River Dyfi is of value to anglers for Salmon and Sea Trout – approx. 400 anglers will fish the river in a season

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- Japanese Knotweed and Himalayan balsam along scheme
- Listed Buildings: Dyfi Bridge, Dovey Cottages and others

**8.8** **ACTION:** EG asked that the location of the gauging station used for flood warning be included on the drawing.

Arup

## 9. Environmental Scoping Report

**9.1** JP explained that the purpose of the scoping report is to identify the scope of the EIA for the scheme. The EIA process is defined by S105A of the Highways Act 1980. The report takes account of the guidance in DMRB.

**9.2** The scheme is located in the vicinity of a number of sensitive areas e.g. the SNP, designated ecological and archaeological sites.

## 10. Air Quality (AQ)

**10.1** The current AQ is good. Background pollutants are inside UK standards. There are no air quality management areas declared within the vicinity of the scheme.

**10.2** The proposed scope of the assessment will include two main assessments: an assessment of potential effects during construction which can be broadly classified into exhaust emissions from vehicles and fugitive dust emissions from site activities; and local air quality assessment (operational phase) for the affected road network.

**10.3** An assessment of regional air quality is scoped out as it is anticipated that the changes in traffic will not meet the criteria defined in DMRB.

**10.4** No comments were made from the meeting.

## 11. Cultural Heritage

**11.1** The existing Pont-ar-Ddyfi and the round barrows are Scheduled Ancient Monuments. There are 29 Listed Buildings within 500m of the proposed scheme and 19 non-designated heritage sites.

**11.2** AB asked that the Millennium Bridge is included within the non-designated heritage sites.

**11.3** The round barrows are close to the Scheme. Any construction activities, even adjacent to the Scheduled Ancient Monuments could have an impact, as they are potentially more extensive underground, with buried remnants not visible on the surface.

**11.4** Archwilio has been referenced but this is a public information resource, and therefore does not provide all available information. The Cadw data should be referenced instead. **ACTION:** Cadw data to be referenced within assessments and scoping report.

Arup

**11.5** AB also noted that for Regional Historic Environment Records the scheme is

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within Gwynedd, Powys and SNPA. **ACTION:** John Roberts (SNPA) should also be consulted with regard to the scope of archaeological survey. John Roberts should also be consulted with regard to any impact on the setting, or direct impact from construction, and associated work e.g. setup, and ground investigation work.

- 11.6** Chris Furneaux explained that the site compound locations will be carefully considered due to flood issues. The main river span would be craned in from the north side. The scheme extent is all on the southern/western side of the Millennium Bridge whereas the round barrows are beyond the Millennium Bridge.
- 11.7** JD advised that the main site compound will most likely be at the southern end of the scheme. A traditional crane lift will be used from the north as the bridge span here is wider to provide a clear span of the river.
- 11.8** Arup asked whether a part of the round barrow field could be used for a satellite compound. AB noted that the presence of the round barrows would not necessarily preclude the use of the field, but this does need to be assessed and agreed through survey work. The process should be assessment then evaluation in consultation with Cadw. If remains are discovered then Cadw would say no to using the field. There is potentially a high risk against the use of the field but investigatory works would provide more information so that a decision could be made.
- 11.9** AB noted that Bronze Age pottery can look like soil, so it is difficult to avoid. Geophysical surveys would pick up magnetic material e.g. cremation urns. However, with magnetic soils detection of finds would be difficult.
- 11.10** The exact locations of the round barrows are defined on site. If cysts are found through investigations then the whole field would be scheduled. Geophysical survey should be done of the whole field if it is intended to consider using this area for a satellite compound with additional surveys of the areas where it would be proposed to locate the site compound. Even the removal of turf, compaction of the ground etc. can cause an impact on monuments. The setting of SAMS should also be considered.
- 11.11** **ACTION** Jim Keyte to speak to AB and John Roberts regarding location of works and geophysical surveys.
- 11.12** Ground investigations (GI) trial holes etc. are to be carried out in the next month. – It was noted that archaeological fieldwork surveys should be undertaken before the GI work commenced and that an archaeological watching brief will be maintained on the trial pits.
- 11.13** LC noted that archaeology could be a significant constraint on the design and construction of the scheme.
- 11.14** Historic Environment Records will give details on reports that informed the Millennium Bridge. **ACTION:** The Millennium Bridge should be included within the Landscape, Community and Travellers chapters of the scoping

Arup

Arup



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	report/ES.	
11.15	AB queried who would be responsible for the maintenance of the existing bridge as Cadw will want to engage with those responsible for its conservation and management. JH advised that Powys CC will be responsible, they will be given a commuted sum to carry out works to maintain the bridge. WG will consult Nigel Bryn (PCC). <b>NOTE:</b> AB to be invited to attend relevant meetings.	WG/Arup
11.16	AB stated that historically the bridge has not being maintained as Cadw would wish. In future it would need to be managed from a Cultural Heritage point of view.	
11.17	AM queried whether there is a timetable for the de-trunking of the road. JH advised that handover elements will be towards the end of the construction period. De-trunking should be kept on the agenda of the ELG meetings.	
11.18	JHu clarified what happens under ECI re. de-trunking i.e. signs and lighting.	
11.19	CF stated that a part of the project will constitute works to close the existing Dyfi Bridge to traffic. Communication will be held with the ELG regarding this matter. The project team will discuss de-trunking with the local authority.	
12.	<b>Landscape</b>	
12.1	The landscape has a rural character with the town of Machynlleth to the south and the Snowdonia National Park to the north. The River Dyfi, the railway line, existing Pont-ar-Ddyfi and the Millennium footbridge are all prominent features in the landscape. Surveys and a desk study will be completed for the ES.	
12.2	JJ stated that landscape will be a crucial part to be discussed at the scoping stage as the bridge will be a permanent feature in the landscape. Mature trees should be retained wherever possible as they are important from a landscape and visual perspective.	
12.3	<b>ACTION:</b> Design team to include retention of trees within design.	Arup
12.4	CW advised that Iwan Evans (Head of Strategic Planning and Policy, SNPA) would like to attend the next meeting. He was invited, but was unable to attend today. It was noted that the bridge will be a 'gateway' to the National Park when approaching from the south.	
12.5	CH described other Trunk Road schemes within a National Park where 'gateway' stones have included the National Park symbol, for example, the A479 Talgarth Bypass into the BBNP.	
12.6	<b>ACTION:</b> CH to send pictures of Talgarth Bridge to JP and BO.	CH (CH2M)
12.7	GE said that it is important to consider the Millennium Bridge and that it is not 'crushed' visually by the New Dyfi Bridge. CF advised that the detail design stage would be when the input into landscape will be most useful. The	

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size of the main span to keep structure out of the river means that it will be elevated and prominent.

### 13. Ecology

13.1 PW explained that Arup have already completed surveys in July and August 2015. Surveys include the following:

- Extended Phase 1 and NVC habitat surveys
- Great Crested Newts
- Badgers
- Hedgerows
- Bats
- Otters
- Water voles

13.2 Aquatic and terrestrial invertebrate surveys completed, more visits by the sub-consultant in spring.

13.3 CW stated that otters are a feature of the SAC, and a mobile feature, so need to be taken into consideration in the environmental assessment. Primary features are the Otter and White-fronted geese that need to be considered. CW questioned whether Atlantic Salmon have been included in the surveys and whether they are a feature of the SAC.

13.4 PW explained that wintering birds are included in the suite of surveys. Assumptions will be made that Section 42 species such as hedgehogs and hares etc. are present.

13.5 JJ & CW raised the issue of Dormice being proven to be present in the valley where there is suitable habitat. There are recent records in the vicinity. A local resident, Jack Grass has personal evaluation of the likelihood of dormice being present.

13.6 **ACTION:** Contact Jack Grass for his personal evaluation of the likelihood of dormice being present.

Arup

13.7 CW stated that the gas pipeline survey data had information on dormice in the area and might be a useful background. **ACTION:** CW to provide dormice information if available.

CW (SNPA)

13.8 JJ stated that surveys for other amphibians, not just GCN, should be undertaken. Toad crossings, gully pots etc. need to be incorporated into the design for amphibians. Lichen surveys should be included for an initial assessment, to include trees and rocks.

13.9 **ACTION:** PW to evaluate the need for amphibians and lichen to be included in the survey work and assessment.

PW (Arup)

13.10 MR questioned whether Arup has included invasive species in their surveys. PW replied that invasive species are included. Removal and control will be included in the design plan. Arup will help to develop an approach to protect

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the structure and the spreading of invasive species. CW advised that in front of the retaining wall the Japanese Knotweed has been sprayed next to the bridge. It was noted that this would not alter its status as contaminated waste so any material would need to be treated accordingly.

- 13.11** JJ stated that an arboricultural assessment needs to be carried out, to ensure trees are located, identified and to include their root structure extents. PW confirmed that a full arboricultural survey to BS5387 has been commissioned. The topographic survey is currently being checked.

## 14. Geology, soils and materials

- 14.1** JP confirmed that ground investigations will take place towards the end of October 2015 (It was confirmed that the archaeology survey work will be completed by then).

- 14.2** Materials will be a separate chapter in the ES.

- 14.3** The underlying geology is Silurian rocks of the Llandovery series. Ground conditions are Silty clay over river-deposited gravels, underlain by siltstone or shale bedrock.

- 14.4** A simple material assessment will be completed given the extent of the scheme and the intent to maximise re-use of site won materials. A contaminated land assessment will also be undertaken.

- 14.5** EG discussed topsoil storage and asked that significant stockpiling of materials should be included in the flood modelling work. JD advised that the storage of materials will be in a suitable area away from flooding. The construction works will be included in the modelling. **NOTE:** It was noted that this aspect should also be included in the AIES.

PW (Arup)

- 14.6** JD advised they are aware of the issue of stockpiling materials in the floodplain and are looking into where to stockpile it. JH advised that where feasible there will be the reuse of arisings from the scheme.

## 15. Noise and Vibration-

- 15.1** Traffic noise, combined with the noise of the river, are likely to be the dominant noise source at the residential receptors and the public paths near to the river. At the southern end of the proposed scheme is the Dyfi Eco Park - here the ambient noise at these locations would most likely be dominated by local traffic noise and noise from the railway.

- 15.2** Baseline noise surveys will be carried out to represent all identified noise sensitive areas.

- 15.3** The assessment of operational noise will be based upon the 'Detailed level' of assessment described in DMRB

- 15.4** Joints on the bridge and noise related to these are being looked into as part of the detailed design.

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		<b>Action</b>
<b>15.5</b>	<b>ACTION:</b> Greg Harris to consider noise relating to joints on the bridge.	<b>Arup</b>
<b>16.</b>	<b>Effects on travellers</b>	
<b>16.1</b>	Effects on all Travellers includes non-motorised users (pedestrians, cyclists, and equestrians), bus travellers and vehicles travellers.	
<b>16.2</b>	National Cycle Network (NCN), Route 8, falls within the study area - This route crosses the Afon Dyfi via the Millennium Bridge and continues adjacent to the Afon Dyfi to the A487.	
<b>16.3</b>	Do we have access to the environmental information for the design of the Cycle path and Millennium Bridge? <b>ACTION:</b> Arup to establish if information exists.	<b>Arup</b>
<b>16.4</b>	Within the study area, there are two PRow which form a continuous public right of way along the southern bank of the Afon Dyfi.	
<b>16.5</b>	The Wales Coast Path crosses over Pont-ar-Ddyfi and continues south along the A487.	
<b>16.6</b>	Various bus routes stop off at Pont-ar-Ddyfi South and Pont-ar-Ddyfi East.	
<b>16.7</b>	NMU surveys will be undertaken during October half term. JJ noted that the half terms are different in Wales and England, so this needs to be considered when undertaking the surveys.	
<b>16.8</b>	A NMU Context Report will be prepared in relation to the design of the scheme and will be referenced in the impact assessment.	
<b>16.9</b>	Based on these a qualitative assessment will be undertaken on the effects of travellers.	
<b>16.10</b>	GE asked which area the NMU surveys will cover. Will they be counts, or face to face surveys? When will they be undertaken? He suggested speaking to the Centre for Alternative Technology (CAT), as employees use the cycle path for commuting. What is the scope of the NMU survey? There are points where the scheme could impact on all users. CF confirmed that the scope of assessment will be checked and that the GE points will be addressed.	
<b>16.11</b>	GE stated that DMRB guidance is outdated for pedestrian and cycle users and to look to use a different set of guidance, e.g. Active Travel Design Guidance, Active Travel (Wales) Act 2013. <b>ACTION:</b> Arup to take account of Active Travel Design Guidance	<b>Arup</b>
<b>16.12</b>	CF stated that the new road has a 2.5 metre wide verge that could be used by pedestrians in flood event.	
<b>16.13</b>	GE asked whether there is scope to improve the current cycle path. Currently there are 5 gates along the riverside footpath/NCR 8 which deter NMU's using it.	
<b>16.14</b>	CF suggested that enhancement might be that the verge could be used by	

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pedestrians and cyclists.

- 16.15** GE advised that this would not be enhancement as the existing cycle path is already without traffic. GE noted that WG have a duty to enhance road schemes for NMUs.
- 16.16** JH commented that the de-trunked section of road north of the existing bridge will carry approximately 60% less traffic. It was noted that fencing off the existing traffic-free route along the south bank of the river would probably still not be acceptable from the landowner's point of view (which was the case when it was constructed). There will be 3 route choices for cyclists with the new road.
- 16.17** CW queried whether cattlegrids could be used across the riverside footpath. JH questioned whether it is justified to spend on this when not many cyclists use the path. The NMU data will advise on this and it was noted that cattle grids may not be acceptable to the landowner or cyclists.
- 16.18** GE requested that the assessment covered a point in 35 years' time.

## 17. Community and Private Assets

- 17.1** Machynlleth is a market town. Key community facilities within the study area include: GP surgeries; Hospitals; Museum; Aged Persons Homes; Schools; Shops; Post Offices; Churches; and Parks, Play Areas and Sports Centres.
- 17.2** The key land use types and private assets within the study area are agricultural land, road infrastructure, commerce and residential.
- 17.3** EG advised that the Angling Association see themselves as being a key contact and claim to own the riverbed and banks of the Afon Dyfi. It was noted that they should be made aware of any temporary works and potential issues. CF noted that the anglers have come up under the Land Registry search but it is not currently clear as to what they own. JH agreed that it is necessary to check the land ownership of the river bed.
- 17.4** JD suggested contacting PCC, as to what happened with the Millennium Bridge. GE suggested Phil Jackson is the main contact.

## 18. Water

- 18.1** The Afon Dyfi has a number of surface water features feeding in to the main river. The Afon Dyfi is included within the Western Wales River Basin Management Plan. Under the WFD it is currently classified as being of a Moderate Ecological Quality and a Good Chemical Quality. The proposed Scheme is located in Zone C2 of the floodplain of the Dyfi River. The proposed Scheme is located above a Minor Aquifer.
- 18.2** No piers or abutments are proposed in the active river channel.
- 18.3** A Water Framework Directive Screening and Flood Consequences

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Assessment will be produced for the scheme.

- 18.4** PB explained that Wallingford HydroSolutions will produce a flood model and look at flood risk.
- 18.5** An assessment of surface water and groundwater impacts during the construction and operation phases, and an assessment of risk of accidental spillage to surface water will be undertaken following DMRB guidance.
- 18.6** PB noted that on the NRW model there is a detailed flood model. A detailed topographic study is being completed. 2 Dulas Rivers (North and South) mean extending the model to include the Dulas South River.
- 18.7** EG asked, from a construction perspective, how often will the location of the site compound be affected by floods? Stockpiling locations should be outside the floodplain to avoid material be washed downstream. NOTE: The construction strategy must consider how often the temporary works areas are likely to be flooded.
- 18.8** JD advised that the Contractor has proposed the old nursery to the south of the site to be used for a compound location.
- 18.9** CF explained there was a potential need to increase the embankment in the temporary case for the bridge launch.
- 18.10** Paul Blackman noted that he had discussed known and historic flooding incidents with NRW.
- 18.11** The houses near to the old bridge have anecdotal flooding events, although it was thought that potentially a component of this was possibly water from the hillside behind the cottages.
- 18.12** The scheme may direct water towards the Eco Park. PB advised that it is currently proposed that there will be flood defence put in place for the Eco Park.
- 18.13** EG advised the first thing to do is to assess the temporary impacts upstream. TAN 15 'no third party impacts', would normally look at compensatory storage. **POST MEETING NOTE:** Compensatory storage should be investigated as part of the FCA/modelling exercise. It could be concluded that compensatory storage may not be effective mitigation in this instance, but this should not be assumed without further investigation. There is a need to look at the impacts on say agricultural land and to adopt a pragmatic approach. **POST MEETING NOTE:** The planning policy (TAN15) is very clear – increases in flooding elsewhere are not acceptable. Nonetheless, I suggested that if increases in 3rd party flood risk on agricultural land are still shown despite mitigation measures, then the practical impacts on the affected land owners should be investigated. For instance, changes to the onset of flooding should be investigated; also consideration should be given to the pre- and post- scheme flooding depth (the planning authority may consider small increases on already flooded land more favourably).

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<b>18.14</b>	A temporary storage area needs to be found, and/or the use of higher ground. It might be that Probable small impact on large return events. At the previous ELG meeting, the Afon Dyfi was noted as being an active river which might affect the design of the bridge and its location, although it was noted that the part of the river where the scheme is located is one of the most stable.	PB
<b>18.15</b>	JP advised that a Geomorphological Assessment file note was put together at the tender stage with Sally German and Candice Constantine from Arup being consulted. <b>ACTION:</b> Include Geomorphological Assessment in the Environmental Assessment.	
<b>18.16</b>	EG questioned whether there will be impacts on the reading at the flood gauging station. If so NRW would need to re-calibrate the gauge, as any impact would affect the flood warning levels. There is known flooding at the railway bridge to the south of the site. <b>ACTION:</b> Paul Blackman to establish if flood model predicts any impacts on the gauging station. <b>POST MEETING NOTE:</b> Change in flood levels due to Scheme would also impact NRW's Flood Forecasting Model, which may also need to be amended to reflect potential changes to the hydraulic regime.	EG (NRW)
<b>18.17</b>	JH advised that the flooding at the railway bridge is not within the scope of the current ECI contract but the team are aware of this.	
<b>18.18</b>	EG suggested that the possible protection to the Eco Park will deal with the flooding of the road.	
<b>18.19</b>	CW asked if there any plans to upgrade the flood gauging station with a wind turbine etc, or the access to the station, as this has happened at other gauging stations in SNP. <b>ACTION</b> - EG to find out about an upgrades to the flood gauging station.	
<b>18.20</b>	EG queried how frequently will the site compound be flooded as this will needs to be included in the modelling work. LC suggested that Cultural Heritage and Flooding will dictate the compound location. CF and JH advised that where opportunities are limited for the compound location and there are environmental constraints then it can be justified and included within the CPO via a licence on the land. This aspect should be assessed and included within the ES and AIES.	
<b>18.21</b>	PB explained that a range of events and benefits to the scheme will be examined.	
<b>18.22</b>	EG queried how far into the future will be considered (e.g. 100 years). The new bridge and road structures will be permanent. Temporary works e.g. site compound and storage of material will also need to be considered. PB advised that there is a requirement for temporary works to be included in the EIA.	Arup
<b>18.23</b>	MR advised that there is a need to consider water supply in the design. EG noted that the drainage design will need to be discussed when available. EG also noted that he would be interested in seeing the flood model with respect	Arup

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- to the design. The runoff from the new road is expected to be minimal.
- 18.24** LC stated that if there are changes in methodologies from those given in the DMRB, then we need to clarify and document in the ES what methodology has been used.
- 18.25** **ACTION:** Drainage design and run-off need to be incorporated and considered in the ES and AIES.
- 18.26** LC discussed long term maintenance and de-icing with salts and how can we protect the river? This aspect needs to be included in the drainage assessment and design. Under the WFD 'no worsening' is no longer acceptable.
- 18.27** **ACTION:** Drainage design and run-off - consideration with regard to WFD. Need to improve (no net change not acceptable). Arup
- 18.28** CF noted that for the existing road bridge, the drainage discharge goes straight into the river. The new road will provide better disposal mechanism as drainage measures will be designed into the scheme.
- 18.29** JJ questioned whether there is a potential for lorries to topple over in high winds due to the funnelling effect of the valley. CF suggested that there may be data that could be collected to look at how open the new viaduct and bridge would be to the funnel effect and high winds. Then use wind shielding or speed limiting to mitigate.
- 18.30** **ACTION:** Arup to consider funnel effect and high winds in the design.
- 19. Assessment of Implications on European Sites (AIES)**
- 19.1** PW discussed the AIES and explained that the main focus will be on Otter and White-Fronted Geese. It will also consider salt residue in the river.
- 20. AOB**
- 20.1** CW raised the potential issue of beavers in the area as they are known to have naturalised from being escapees. Dave Thorpe at NRW would be able to provide information on beavers in this area.
- 20.2** LC advised that if the beavers were not released under licence then the beavers would need to be caught and re-released as they could have liver fluke if they are not European beavers. A discussion followed on whose responsibility is it to determine whether these beavers are native.
- 20.3** PW noted that American beavers are not protected under UK or European Legislation.
- 20.4** **ACTION:** Arup to contact NRW, through MR, to find out what information has been gathered previously on beavers in this area. Arup
- 21. Future Statutory Bodies / ELG engagement**
- 21.1** The notes of the meeting will be circulated as a draft for review and



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amendment. Whilst verbal comments were received at the meeting, written comments were requested by Friday 25th September 2015.

- 21.2** JP advised that there will be regular ELG's and some workshops. The next ELG meeting will be after the design freeze in late November / December 2015. The contacts list will be circulated with the notes of the meeting so the project team has this information.
- 21.3** LC reviewed the actions from the meeting:
- 21.4** Cultural Heritage - John Roberts, SNPA and Cadw will be consulted regarding surveys and methodology
- 21.5** Cadw to be liaised with regarding the de-trunking of Pont-ar-Ddyfi
- 21.6** JH to speak to Powys CC about the existing bridge and responsibilities on completion of the new bridge. **POST MEETING NOTE:** Discussions regarding the existing structure are on-going. It is very likely that PCC will accept responsibility for this structure under the de-trunking proposals but we are still in the process of talking to Gwynedd CC and we need to get PCC and GCC to formally agree who is going to maintain the structure once the new bridge is commissioned.
- 21.7** Landscape - Iwan Evans to be invited to attend the next ELG meeting. The project contacts list is to be updated and issued with the notes of the ELG meeting.
- 21.8** Ecology - Consider other amphibians such as toads and newts (other than GCN) & also lichens. Utilise existing dormice records.
- 21.9** CW to assess availability of local information held by the SNPA on dormice and beavers and issue if available.
- 21.10** MR to speak to Dave Thorpe regarding beavers.
- 21.11** CF and JD - consider additional land take for material storage and drainage.
- 21.12** NMU - speak to CAT. Careful consideration of disparity in school periods and normal use when undertaking NMU surveys. Consider long-term impacts.
- 21.13** In the EIA and AIES ensure assessment methodology is clearly stated and particularly when deviating from the standard DMRB methodology.
- 22. ELG Site Walkover**
- 22.1** The ELG site walkover after the meeting was attended by: James Healey, Luci Collinwood, Julie Hunt, Catherine Holland, Jessica Postance, Jill Jackson, Caroline Wilson, Glyn Evans.
- 22.2** The site visit attendees walked from the Millennium bridge along the riverside footpath and NCR8 to the existing Pont ar Ddyfi and back and discussed various aspects of the scheme, including: looking at the round barrows field, the landscape aspects, the loss of vegetation and how this

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would open up views of the scheme, the use of NCR8 and whether it might be possible to improve the situation for cyclists and the gates, the view from the existing bridge and the extent of Japanese Knotweed and Himalayan Balsam along each of the river banks.

**22.3** Whilst at the Millennium Bridge, GE asked about the relative heights/elevations of the Millennium Bridge and the proposed new bridge.

**22.4** **ACTION:** Send Sustrans, if available, a preliminary elevation showing the relative elevations of both bridges and a plan showing separation distance.

Arup

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Meeting name and number	Environmental Liaison Group No. 3	File reference 900237-ARP-ZZ-ZZ-MI-YE-00003
Location	Y Plas, Machynlleth, Powys SY20 8ER	Time and date 11:00 19 January 2016
Purpose of meeting	To provide an update on the scheme, environmental surveys, progress on assessment and environmental design.	
Present	Jessica Postance (JP), Arup James Healey (JH), WG Julie Hunt (JHu), CH2M Pete Wells (PW), Arup Julian Davies (JD), AG Meryl Read (MR), NRW Jill Jackson (JJ), NMWTRA Caroline Wilson (CW), SNPA Mark Walters (MW), CPAT	Chris Furneaux (CF), Arup Cathie Holland (CH), CH2M Amanda Murdock (AM), Arup Ben Oakman (BO), Arup Dale Boyington (DB), PCC Iwan Evans (IE), SNPA Glyn Evans (GE), Sustrans John Roberts (JR), SNPA Ian Halfpenney (IH), CADW
Apologies	Luci Collinwood, WG Len Wyatt, WG Rhys Jones, GCC Mannon Lewis, NRW Kathryn Roberts, Cadw Suzanne Whiting, Cadw Rachel Price, PCC	Matthew Griffiths, Corderoy Peris Jones, Welsh Government Gwilym Jones, SNPA Clare Parry, NRW Anthea Jones, PCC Emyr Gareth, NRW Richard Bruten (RB), AG
Circulation	Those present and apologies David Rowlands, AG Patrick Green, NRW	Richard Bruten, AG Paul Blackman (PB), WHS

## Action

- 1. Introduction and Purpose of the Meeting**
  - 1.1** The meeting began with JP introducing herself as the Environmental Coordinator for the Scheme. The rest of the group made their introductions.
  - 1.2** JP reported that all the actions from the previous minutes have been closed out.
  - 1.3** The purpose of the meeting was to give an update on the scheme, environmental surveys, progress on assessment and environmental design.

Prepared by Amanda Murdock  
 Date of circulation 28/01/2016  
 Date of next meeting TBC

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### 2. Key Stages and Programme

JP provided an update of the key stages for the scheme.

- Contract Award – July 2015
- Environmental Scoping – completed mid-Jan 2016
- Initial design freeze – December 2015
- Presentation of 1:2500 plans to Welsh Government – January 2016
- Publish Environmental Statement, SIAA and draft Orders – June 2016
- Key Stage 4 Statutory Process
- Key Stage 6 Detailed design and construction

### 3. Scheme Design

#### 3.1 CF described the current scheme design:

- The scheme is a new viaduct crossing the River Dyfi with a new priority T-junction at the northern end.
- Existing accesses, including the cycleway and footway will be maintained.
- The viaduct will be a single carriageway with a 2.5m verge on one side.
- There will be no formal cycle/footway provision on the viaduct however there will be no restricted access for Non-motorised Users (NMUs).
- The viaduct would be subject to the National Speed Limit with a 30mph limit at the southern end of the viaduct before the railway bridge.

#### 3.2 GE raised concerns that there would be no formal access for pedestrians and cyclists over the viaduct. CF explained the difficulties in design/cost if the scheme were to accommodate a DMRB compliant Non-Motorised User (NMU) access. DB highlighted that a 100m ‘gap’ in pedestrian provision would exist between the viaduct and an existing footway. It was suggested that providing a link between the two would be advisable. CF agreed that this would be considered.

Arup

#### 3.3 The ELG were shown the current visualisation of the scheme that was presented at the Public Information Exhibition.

#### 3.4 CF explained that the southern embankment of the scheme is a flood bund which will be constructed behind the existing NMU route. The current drainage ditch will be re-profiled to accommodate the new scheme drainage.

#### 3.5 CF confirmed that the current design did not require lighting. It was noted that in December 2015, Snowdonia National Park had been designated an International Dark Sky Reserve.

#### 3.6 CF advised that the scheme has been presented to Design Commission for Wales (DCfW). As a result of this, Arup are re-considering the shape of the piers.

#### 3.7 A round table discussion of the nature of construction and some design aspects followed with the following points being clarified:

- The design and construction of the viaduct is based on a ‘push launch construction’ proposal.

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- The viaduct and bridge will be a steel structure supported by two concrete columns except near the bridge where it is currently proposed to use a leaf pier. The form of the piers is based on the flow of water and the flood modelling results. An alternative pier form is currently being considered subject to the results of the flood modelling and flood implications.
- There will be a galvanised steel parapet along the length of the bridge and the viaduct.
- Landowner access is likely to be required under the bridge at its northern end.
- The viaduct and bridge steel will either be painted or a weathered steel.
- Approximately one metre of material will be excavated for each pier.
- A reinforced, with mesh, maintenance access track installed for construction purposes will be left in place alongside the new bridge/viaduct. Access under the bridge would be kept open to allow for animal movement. The surface treatment of this area has yet to be determined, but will take account of the effect of shading and a lack of rain.

## 4. Railway Bridge Inclusion

**4.1** CF explained that the Railway Bridge area is prone to flooding. Concerns over this has led to this area being considered as a part of the current scheme. The current scope of work is to understand the flood issues, followed by a consideration of the options which are available to resolve the problem. Flood modelling shows that the Dyfi Eco Park is prone to flooding and that this contributes to the flooding of the railway bridge. Initial discussions with Network Rail have commenced.

**4.2** CF noted that if the railway bridge arch were to be opened up this would enhance access for NMUs through this area. Initial discussions with Network Rail have commenced on this also.

## 5. Flooding Model Update and Flooding Options

**5.1** The ELG was shown a time-lapse animation of the flood model. The model showed that with the scheme, the Dyfi Eco Park and other nearby buildings are protected. The viaduct is designed for the 1:100 + global warming flood event.

**5.2** CW queried whether the model replicates the recent flood event. CF explained that it is unknown whether it would be a comparable flood event however recent site visits during the flooding indicated the same sort of flooding mechanisms.

**5.3** JR asked if it was known what the recent impact on the existing Dyfi Bridge was. It was generally thought that gardens were flooded and the water rose to the bridge arches. Damage to the railings and pavement along the approach road were currently being repaired however no know inspection of the bridge was undertaken.

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### 6. Update on feedback from Public Information Exhibition (PIE)

6.1 CF discussed the outcome of the PIE held on 7<sup>th</sup> October 2015 with the following being some of the points recorded:

- Over 320 people signed their attendance;
- 200 feedback forms were filled in;
- Flooding under the railway bridge was a common concern – noted that the new A487 route over the floodplain did not resolve access issues into Machynlleth as there were no proposals to alleviate the flooding in this area;
- Concerns regarding safety of the northern junction were raised - suggested the incorporation of a roundabout in the area to slow the speed of the route and mitigate the potential danger;
- Clarification of NMU facilities in the area when the valley was flooded and the existing road was under water – would there be NMU provision on the proposed bridge and viaduct;
- Suggestion that a Machynlleth Bypass was needed;
- Safety and traffic speeds - Concerns were raised about the straight route on the viaduct and the mainline where speeds could potentially be high, increasing the hazards to non-vehicle users and to the drivers themselves;
- Comments regarding the visual impact – comments for the Scheme to blend in with the surrounding area more effectively, changing the colour of the design or indeed, making the scheme proposal stand out more to make something of a feature of the proposal;
- Comments about the existing Pont ar Ddyfi – requests for the old bridge to be kept open for vehicles, especially those farmers requiring access for their fields. But some comments also asked for the old bridge to be closed to traffic to prevent accidents, traffic jams and sustain the bridge.

6.2 JH advised that Councillors within Tywyn were unhappy as they claim to not have been consulted.

### 7. Environmental Scoping Report

7.1 JP thanked the ELG for their comments on the Scoping Report and advised that the comments had been incorporated within the report. This is currently being updated following a WG review. IE asked whether the ELG members will receive a copy of the final Scoping Report to see how the comments have been incorporated. JH advised that clarification would be sought from Luci Collinwood.

Arup/WG

### 8. Assessment of Implications on European Sites (AIES) Update

8.1 PW advised the ELG that a site surveys have been carried out and assessment for the AIES is being undertaken. It is not currently predicted that there will be a significant effect.

8.2 CH/CW queried whether otters and fish spawning grounds would be considered. PW confirmed that they would be considered and if there are

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issues, construction vibration would be timed with fish migration. PW noted that surveys included the overwintering Greenland White Fronted Geese based on the Dyfi Estuary SPA.

- 8.3** CW noted that bottle nose dolphins were a feature of the Pen Llyn a'r Sarnau SAC and could be affected by vibration for a distance of up to 50km and queried whether this was being considered.

## 9. Update on Environmental Surveys and Assessment

### 9.1 Environmental Statement (ES)

- 9.1.1** The first draft of the Environmental Statement is due for an internal review in mid-February 2016. Due to the survey programme some ecological work will be provided as supplementary environmental information. The ELG were advised that the Statutory Environmental Bodies would be issued with a copy of the ES in March and would have 4 weeks for review. The final ES will be published in June 2016.

### 9.2 Air Quality

- 9.2.1** Air quality would be based on a local scale assessment.

### 9.3 Cultural Heritage

- 9.3.1** JK stated that the surveys have worked well and all areas needed for the construction area and site compounds have been covered.
- 9.3.2** JR expressed concerns that the survey should have been extended to include the barrow fields. JK reassured that all areas that would be needed for the works have been surveyed however an intrusive survey will be needed in some areas.
- 9.3.3** IH/JH discussed the future maintenance and conservation of the existing Dyfi Bridge. JH advised that discussions with Powys County Council and Gwynedd Council have been opened up and the next meeting was scheduled for early March 2016. JR noted that water is a big issue for the existing bridge and that with the use of the bridge by traffic it is looked after, but without this incentive the structure is potentially at risk. It was suggested that perhaps the upkeep of the bridge could be a 'shared' role.
- 9.3.4** It was noted that Ian Halfpenny was now attending the meetings for Cadw so invitations regarding potential Dyfi Bridge meetings should be sent to him.

WG/Arup

### 9.4 Landscape

- 9.4.1** BO advised that the LVIA and landscape design has been progressed. The group were taken through the identified sensitive receptors and where trees would be removed and replaced. The embankment would be S shaped and steep.
- 9.4.2** CH suggested that the northern junction could have a stone wall rather than a hedge line to be in keeping with the adjoining highway boundary walls, as a common feature within the Snowdonia National Park and to provide an

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immediate maturity for the scheme. BO advised that although stone walling is a common feature in the area, in the locality there are very few of these, a hedge line would be more in keeping.

Arup

**9.4.3** JJ raised the issue of the proposed planting as shown, its ownership and access for its maintenance. Planting needed to be contiguous with the scheme and justified in terms of the mitigation measures to ensure accessibility for maintenance.

**9.4.4** BO advised that the maintenance track, alongside the viaduct would be largely invisible and constructed of a reinforced plastic and seeded with grass.

**9.4.5** IE questioned what the DCfW thought about the effects on the landscape. BO advised that DCfW felt the views of the bridge should be open with no landscape scheme to screen it, to celebrate the aesthetic qualities of the structure.

**9.4.6** GE asked whether DCfW had commented on the impact of the new bridge on the Millennium Bridge. No comment was made.

**9.4.7** IE asked whether it would be possible to use a darker concrete to construct the bridge as the usual 'bright' concrete would be intrusive in the landscape and not in keeping with the surrounding geology. CF advised it could be something to consider.

Arup

**9.4.8** JJ asked whether the bridge piers could be stone clad. JD explained that this would not be appropriate as this would make them larger, more visually intrusive and have an impact on the flood modelling/flood implications. The stone facing of the abutments might be considered.

## **9.5** Ecology

**9.5.1** PW gave an update on the surveys completed and those programmed in.

**9.5.2** Bat activity has been detected along the river and hedge boundaries. It is possible there are roosts in the area.

Arup

**9.5.3** CH questioned whether any horseshoe bats have been identified. PW advised that as yet horseshoes have not been detected however static data has not been reviewed. *Post Meeting Note: Lesser Horseshoe and Greater Horseshoe bats have been identified from review of the static data.*

**9.5.4** JJ queried whether the railway arch had bat potential. PW advised that this would be surveyed if required. The existing Dyfi Bridge would be surveyed if required.

Arup

**9.5.5** CW queried the use of the term 'Amenity Grassland' on the National Vegetation Survey Maps. PW agreed to review this.

**9.5.6** CH questioned whether the presence of Japanese Knotweed was picked up in the survey. PW advised that the Phase 1 Habitat survey had identified this and Himalayan Balsam.



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- 9.5.7** CH queried the use of wildlife fencing and where any wildlife fencing would be located. CF/PW advised that this needs discussion and will depend on where the highway boundary is. CH also raised the issue of whether a wildlife-proof fence without a crank would be acceptable as agreed on other trunk road schemes. JJ agreed that in landscape and visual terms a cranked fence was not desirable, but advised that the use of a crank shouldn't be discounted and a decision needed to be based on the fence location, survey results and likely otter movements. Arup to consider. Arup
- 9.5.8** JJ advised that there is a big problem with amphibians getting trapped in drainage systems, particularly the modern sumps. Arup confirmed that they are currently considering this issue in their drainage design. Arup
- 9.6** Geology & Soils
- 9.6.1** GI works are almost complete, flooding delayed the programme.
- 9.6.2** JR questioned where the reworked material would come from. JD advised that the northern junction would yield material. The northern junction is located on fractured rock which will need grading back. JD confirmed that the use of soil nails wouldn't be required as the slope would be graded back with possibly some seeding and planting where feasible. JD advised that there was no need for material storage as it would be used straight away.
- 9.7** Noise and Vibration
- 9.7.1** The noise assessment was based on a 600m area from the scheme.
- 9.7.2** A survey of noise or vibration on sensitive buildings and amenity areas has been undertaken. The baseline noise model has been built. JP explained that baseline noise surveys have been delayed due to severe wet weather but are due to be undertaken in Jan/early Feb 2016. Arup/WG
- 9.8** Effects on All Travellers
- 9.8.1** The NMU context report was issued to WG on 15/01/2016.
- 9.8.2** GE expressed his concern that the Active Travel Act, which came from the Welsh Government, is not being adhered to and that a formal, dual use access is not included on the new bridge. It was noted that a fully compliant bridge with dual use access would be more expensive and the cost benefit to tax payers would need to be considered. Arup
- 9.8.3** Action: JH advised that the team would look into how many people use the current routes per day, how many cyclists and pedestrians. In addition what would need to be done to accommodate NMUs on the current scheme? Arup
- 9.8.4** GE queried whether Arup have consulted with CAT. Arup advised that they hadn't done this yet. Arup

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### 9.9 Community and Private Assets

9.9.1 The land-use site work is being undertaken this week with visits to landowners and the completion of questionnaires.

9.9.2 It was confirmed that there are three landowners affected by the scheme. Access under the viaduct will be possible which will minimise the effects of severance.

9.9.3 Landowner access will be required off the existing de-trunked section of the A487, including services such as BT. This will determine any design proposals for the de-trunked existing A487.

### 9.10 Water Environment

9.10.1 The hydrogeomorphologist met with NRW and will be producing a WFD Compliance Assessment report. It was noted that there are three catchments areas: a northern, middle and southern area.

9.10.2 The Flood Consequence Assessment will have to show that the situation was not worse after the construction of the scheme.

9.10.3 CF confirmed that they were looking at a piped drainage system based on kerb and gullies. It was also noted that some bank stabilization works will be required to take account of future flooding.

9.10.4 Action: to check that the study area of the FCA to ensure it encompasses the existing Dyfi Bridge.

Arup

## 10. **Environmental Design and Potential Mitigation**

10.1 JP advised that when the assessments are complete, an update of the potential mitigation measures will be available.

## 11. **Future Statutory Bodies / ELG engagement**

11.1 JP advised that, going forward, engagement with ELG members will be part of focused technical working groups to focus on more detailed, topic-specific discussions. Topic specialists will contact the relevant people where appropriate to organise these. It was noted that a flood TWG had already been held in December 2015.

Arup

## 12. **AOB**

12.1 GE noted that he remained concerned about design issues and would like a further discussion on these aspects of the scheme.

Arup

12.2 A discussion was held on whether a public local inquiry would be required. JH stated that whether the scheme goes to PI is dependent on the level of any objections and whether these are statutory or non-statutory. Statutory objectors being landowners and statutory bodies.

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Meeting name and number	Environmental Liaison Group No. 4	File reference 900237-ARP-ZZ-ZZ-MI-YE-00003
Location	Y Plas, Machynlleth, Powys SY20 8ER	Time and date 11:00 9 August 2016
Purpose of meeting	To provide an update on the scheme and the environmental design, and to facilitate discussion of any issues arising from your reviews of the draft Environmental Statement and other relevant documents issued recently	
Present	Peris Jones (PJ), Welsh Govt Luci Collinwood (LC), Welsh Govt Chris Worker (ChW), Welsh Govt Julie Hunt (JHu), CH2M Cathie Holland (CH), CH2M Chris Furneaux (CF), Arup Pete Wells (PW), Arup Tara Richards (TR), Arup Julian Davies (JD), AG David Rowlands (DR), AG	Meryl Read (MR), NRW Jill Jackson (JJ), NMWTRA Caroline Wilson (CaW), SNPA Gareth Lloyd (GL), SNPA Ian Halfpenney (IH), CADW
Apologies	James Healey (JH), WG Len Wyatt, WG Richard Bruten (RB), Kathryn Roberts, Cadw Rachel Price, PCC	John Roberts (JR)SNPA Rhys Jones, GCC NRW Mannon Lewis Suzanne Whiting, Cadw Iwan Evans (IE), SNPA
Circulation	Those present and apologies	

## Action

- 1. Introduction and Purpose of the Meeting**
  - 1.1** The meeting began with PW introducing himself as the Environmental Coordinator for the Scheme. The rest of the group made their introductions.
  - 1.2** The purpose of the meeting was to give an update on the scheme and the environmental design, and to facilitate discussion of any issues arising from the review of the draft Environmental Statement (ES) and other relevant documents issued recently.

Prepared by Tara Richards  
Date of circulation 04/11/2016  
Date of next meeting TBC

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## Action

### 2. Actions from Previous ELG Meeting

- 2.1** CF listed some of the actions arising from the previous notes of meeting and the status of the action:
- 2.2** Proposed scheme changed from initial proposals to include a shared footway/cycleway across the new viaduct, which requires a taller parapet (1.4m) and mesh infill.
- 2.3** Discussions are ongoing with Cadw on the ownership of the existing bridge however there is an agreement that it will remain with Welsh Government.
- 2.4** All ecological surveys have been completed and will be discussed later on.
- 2.5** Since ELG no.3 in January 2016 separate discussions have been held with individual organisations e.g. NRW.

### 3. Initial General Points

- 3.1** Some people noted that they had been unable to download the Environmental Statement documents, there were duplicates of Volume 3 and some of the documents were dated March 2016. It was noted that TR had sent reduced sized and word documents to those SEBs having problems week commencing 1<sup>st</sup> August. It was agreed at the ELG meeting that TR would send all SEBs word and pdf versions of the ES documents. The time to review the ES documents was extended by a week, with the return of SEB comments by 19<sup>th</sup> August, a week after the 12<sup>th</sup> August deadline.

**Action: TR to send all SEB's word and pdf documents of the ES on a USB –**  
*Post meeting note:* Completed USBs sent morning of 11<sup>th</sup> August 2016.

**Arup**

- 3.2** JJ stated that, from the appendix documents she had been able to access the documents appeared good but hadn't been able to access the Environmental Statement. When JJ read the ES, she found that some parts were disappointing and had not included many pertinent details/issues that were picked up in the appendix documents.

### 4. Scheme Design

- 4.1** CF went through the Scheme's Transport Planning Objectives which were developed during the WelTAG Planning Stage and reported in the WelTAG Planning Stage Report (April 2012).
- 4.2** CF described the key design considerations and changes which had occurred since the January 2016 ELG meeting:
- **The northern junction design:** ghost island priority junction or roundabout – the proposed scheme remained unchanged and includes a ghost island priority junction;

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- **Flooding impacts** – residential properties, agricultural land and Pont-ar-Ddyfi – the proposed scheme has changed from the initial proposals to include a longer viaduct to minimise the flooding impacts;
- **NMU provision on new viaduct** - the proposed scheme has changed from the initial proposals to now include a shared footway/cycleway across the new viaduct, which requires a taller parapet (1.4m) and with a mesh infill;
- **Northern abutment layout** – the proposed scheme includes a northern abutment setback from the edge of the slope down to the river, to include an agricultural and NMU access in front of the bridge abutment;
- **Railway bridge** - resolving the flooding under the railway bridge was not initially a part of the scope of the scheme but has now been included – the proposed scheme includes provision for a pump to address the flooding under the railway bridge;
- **Pont-ar-Ddyfi access arrangements** – access arrangements across Pont-ar-Ddyfi remain unchanged from the initial proposals; being limited to NMUs and authorised agricultural access only (i.e there is no through route except for NMUs).
- **Southern end and minor change to the layout of the agricultural access:** at the southern end there has been a change in the scheme alignment with the inclusion of a flood bund. (An agricultural access immediately to the northwest of the railway bridge has been changed compared to the option presented in the draft Environmental Statement circulated to SEBs.) The access will now connect to the realigned existing road, just north of its junction with the new A487 alignment, rather than directly onto the A487, to provide better visibility.
- **Localised flood mitigation measures:** would be provided to ensure no increase in flood risk to the existing bridge and adjacent residential properties

## 5. Key Stages and Programme

5.1 CF provided an update of the key programme stages for the scheme:

- **Key Stage 3** – On the basis of receiving comments from the SEBs by 19<sup>th</sup> August it is the intention to publish Draft Orders, the Environmental Statement and the SIAA during October 2016;
- **Key Stage 4** – There will be a 6 week statutory consultation period and if a Public Inquiry is required this would take place in Spring 2017;
- **Key Stage 6** – Construction to start in 2017 depending on funding and the outcome of the Public Inquiry if held. 2017 to 2019 would be required for the Scheme Delivery including the Detailed Design and Construction. The completion of the construction works was anticipated to be by March 2019 followed by a 3 year aftercare and monitoring period.

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### 6. Update on Environmental Surveys and Assessment

- 6.1 The draft Environmental Statement ES is currently being reviewed by the SEBs. PW described, with reference to slides, the main conclusions of the ES per topic chapter with the following being a summary of the main points raised at the meeting:

#### Air Quality

- 6.2 LC questioned if the assessment had factored in acceleration/declaration and how had the assessment dealt with changes in omissions associated with vehicle speeds with and without the scheme. **Action: Arup to update LC on how the scheme has dealt with changes in omissions associated with vehicle speeds with and without the scheme.**

Arup

#### Cultural Heritage

- 6.3 It was confirmed that the northern construction compound 'lay-down' area will be fenced off from the Fridd Round Barrows. IH thought the Scheme would not have an impact on the Fridd Round Barrows.

- 6.4 LC asked how much confidence Arup have in the geophysical survey of the floodplain sediment. How will Arup/AGC address potential finds that were not anticipated and would there be programme implications? LC noted that there could be a 12 week delay if there were archaeological finds. Arup confirmed that they have undertaken additional geophysical surveys for the changes in route. Arup have good geophysical results but could not confirm if everything had been picked up. **Action: Arup to check this aspect with their cultural heritage specialist.**

Arup

- 6.5 Arup to confirm if they have undertaken evaluation trenches as a part of the archaeological survey work. **Action: Arup to confirm this.**

- 6.6 LC queried if the cultural heritage assessment is in compliance with the Historic Environment (Wales) Act 2016? IH confirmed that the Act will not affect the cultural heritage assessments as it mainly relates to Listed Buildings and Scheduled Monuments. **Action: Arup to ensure the Historic Environment (Wales) Act 2016 is listed in the policy and legislation section of the ES.**

Arup

Arup

- 6.7 PW confirmed where the northern compound will go in relation to the Fridd Round Barrows. AGC confirmed that the laydown area will be a hardstanding. AGC stated that it has not yet been agreed where the main contractor's compound will be located as this is the subject of ongoing discussions with potential landowners. It was confirmed that the main compound will be in an area outside of the floodplain.

#### Landscape and Visual

- 6.8 LC asked that townscape issues associated with Machynlleth be included in the assessment. **Action: Ben Oakman (landscape architect) to ensure any Townscape assessment is included.**

Arup

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**6.9** Arup's response: Townscape issues associated with Machynlleth have been included within the assessment.

**6.10** LC and JJ queried the extent of the existing vegetation shown on the sketch figures presented by PW as it appeared to be more extensive than in reality. **Action: Arup to review.**

Arup

**6.11** CF stated that the Northern Junction will not be lit. The cut face will consist of a rock cut with some potential areas for grass and wildflower seeding. JJ expressed concern about cut faces being a potential maintenance problem area for the future invasion by gorse rather than the desired grass/wildflowers.

**6.12** JJ referred to the tree report and the number of ash trees present across the scheme area. JJ noted that she was concerned about the impact of ash dieback on the landscape and visual impacts and screening due to the loss of trees.

**6.13** JJ was concerned about access for the future maintenance of the new planting and asked that this included in the design. **Arup: to check scheme maintenance access to planting areas.**

Arup

## Ecology

**6.14** PW confirmed that the assessment references both Greater and Lesser Horseshoe bats: primarily Lesser Horseshoe Bats and one passing of a Greater Horseshoe Bat.

**6.15** CaW noted that the minutest diving beetle, a Red Data Book species, had been recorded in the river/shingle area at the new bridge location. PW confirmed that there were no records from recent samples of aquatic invertebrates' species surveys undertaken in Sept 2015 and May 2016.

**6.16** JJ queried dormice presence and the way this species had been dealt with in the ES. CaW noted that she had dealt with a pipeline project 500m from this scheme and that the botanical report had shown that dormice were in the area close to the pipeline scheme. **Action: CaW to forward this information to PW.** ChW noted from processing dormice licences, that there was a dormice presence in the general area further north (Corris) and east of the scheme. It was thought this would not change the context of the Dyfi Bridge scheme but in the ES perhaps change the assessment to assume low level populations. PW thought that the only area where the Dormice could be present was on the northern river bank where there was a good vegetation cover. **Action: PW to review the ES wording to assume a low level population in the local area rather than state there are none.**

SNPA (CaW)

Arup

**6.17** NRW noted that in a previous ELG, in September 2015, they had requested dormice surveys. **Action: PW agreed to look into this**

Arup

**6.18** There had been an unauthorised release of a European Beaver in this area with ChW noting that NRW have evidence of a beaver using the River Dyfi. However NRW noted that an "Escaped beaver is not considered to be native" so wouldn't be covered by European Protected Species (EPS) legislation.

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ChW noted that they were taking a 'Scottish' stance on the status of the beaver. Beavers are outside of their natural range /are not an EPS and it was noted that the ES does not consider beaver. **Action: ChW will follow this issue up with WG.**

WG (ChW)

### Geology & Soils

**6.19** PW confirmed that the Agricultural Land Classification is Grade 4.

### Materials

**6.20** LC queried whether there was a cut and fill balance. AGC noted that there will be a small import of materials to be used in the main for the flood bunds. Temporary storage of top soil will be located outside the floodplain area. Import material will probably be from nearby quarries.

**6.21** JJ and CH noted that there are a lot of invasive species in the scheme study area such as Japanese Knotweed (JK), Himalayan Balsam and Crassula Helmsii with the potential to disturb and spread these invasive species.

**6.22** It was noted that the means of dealing with the JK and other species had not been covered in the draft ES. NRW confirmed that the ES needed to. Timescales probably meant that herbicide control was not an option. It was thought unlikely that there was a bank which would be deep enough to bury the invasive species to prevent it growing. AGC advised that they were currently considering encapsulation of the JK in a cell which could then be covered with 2m of material. An element of spraying pre and post construction may be possible where the JK was not to be excavated and removed. There will be a detailed invasive species management plan for the construction phase of the scheme. It was confirmed that excavation of the JK was required for a distance of 7m from the edge of a stand. It was noted that this would be difficult where the JK extended beyond the scheme. It was noted that the treatment of the JK needed to be covered in the ES as it could have programme, material removal, landscape and ecological implications. **Action: Arup to review the ES with respect to invasive species.**

Arup

**6.23** It was suggested that there needs to be advice from WG on how far from the extent of the scheme is required regarding invasive species. **Action: WG to provide advice on the extent of the scheme with respect to invasive species such as the JK.**

WG (LC)

**6.24** LC queried whether a list of plans will be included in the CEMP such as the biosecurity management plan, the biodiversity management plan. The phasing and logic of building during Key Stage 6 needs to be included within the ES – LC noted the M4 could be referenced for a list of plans. **Action: LC noted she can provide a list of plans if required; Arup to ensure they have a list of plans within the ES.**

Arup/WG  
(LC)

### Noise and Vibration

**6.25** No issues were raised.

### Effects on Travellers



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**6.26** LC asked where the new request bus stop will be located as the existing bus request stop is south of the existing Pont-ar-Ddyfi. LC suggested discussions should take place with bus companies. LC asked how often is this existing bus request stop used. **Action: Arup to confirm how often the existing bus request stop is used.** **Arup**

**6.27** There are good NMU routes over the existing Pont-ar-Ddyfi and the viaduct. Within the Effects of Travellers assessment, vulnerable users are considered in relation to connectivity i.e. in times of flooding when the existing bridge floods – pedestrians can use the new scheme. .

### Community and Private Assets

**6.28** No issues were raised.

### Drainage and Water Environment

**6.29** LC asked why there is a slight adverse effect on groundwater during operation of the Scheme. **Action: Arup to review the slight adverse effect on groundwater during operation.** **Arup**

**6.30** A Water Framework Directive (WFD) assessment has been undertaken and a number of recommendations have been outlined. Action: LC to confirm whether she needs to review WFD before ES? **Action: PW to send WFD to LC.** **Arup**

**6.31** LC asked whether the drainage and water environment assessment in compliance with the Wellbeing of the Future Generations Act (FGA) 2015? It was stressed that the scheme needs to demonstrate compliance with the FGA. LC and ChW suggested reviewing the mitigation measures which have been included in the scheme and list out as enhancement measures for example with the use of stop logs for pollution control in ditches. **Action: Arup to look at FGA and include enhancement list within the ES.** **Arup**

**6.32** ChW questioned what provisions are in place for a tanker spill for example from an oil or milk tanker. PW stated that there are three drainage catchments within the scheme area; one to the north of the scheme one in the central section and one to the south. There is currently no pollution interceptor within the new ditch which is parallel to the existing A487 leading to Pont-ar-Ddyfi. Currently the scheme has no way of impounding tank spills. PW stated that we are including an interceptor in the northern catchment. It was proposed that Arup/AGC should look at whether a petrol interceptor can be fitted into the southern end of the scheme. **Action: CF to look into the issue of pollution control.** **Arup**

**6.33** It was confirmed that the measures which are in place when the area floods will be the same as it is now for the de-trunked A487/Pont-ar-Ddyfi.

### Other Issues Raised

**6.34** MR has a number of pollution control comments to send across. MR confirmed that NRW still refer to the Pollution Prevention Guidelines. **Action: MR to send across pollution control comments to PW.**

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- 6.35** It was noted that the concrete colour of the viaduct and bridge and the stone facing of the northern abutment was still under discussion, but needed to be closed out and included in ES before the LC review. **Action: CF/Ben Oakman to review and close this matter.** **Action NRW**
- 6.36** References to Environment Act Wales (2016) and Wellbeing of Future Generations Act (2015) – enhancement needs to be covered and clearly explained in the ES. Arup confirmed that the drainage design has considered amphibians with the details being developed at the detailed design stage. It was noted that this is a mitigation measure which needs to be included in the ES. Again this was noted as being a good example of enhancement which should be highlighted. Similarly where the new A487 ditch will include stop logs for pollution control. Emphasise planting where there was previously no trees/hedges, this is an example of enhancement. It was confirmed that as a viaduct rather than a road it is not reducing connectivity, making it permeable for bats, using the flight-lines along hedgerows. It was asked whether bat boxes could be included under the viaduct/bridge? It was thought that this was unlikely due to the need to access the bridge without resorting to licenses whenever work was required. LC suggested the ES could include a table of enhancements. **Action: PW to ensure details of enhancement are included within the ES.** **Action Arup**
- 6.37** **Action: LC noted she would provide some enhancement examples from another scheme** **WG(LC)**
- 6.38** Environment Wales Act (2016) – potential for carbon calculations to be considered. How carbon is to be recorded on projects. **Action: LC to pass information to PJ.** **WG(LC)**
- 7. Assessment of Implications on European Sites (AIES) Update**
- 7.1** ChW will submit the SIAA to the Minister for endorsement, however he cannot submit to the Minister until the pollution control/ impoundment issue is resolved. The SIAA is not currently acceptable without describing the pollution control measures. **Action: CF/PW will consider as described under point 6.29 above.** **Action Arup**
- 7.2** Issues with Table 2 conclusions. In Table 3 JJ didn't necessarily agree with the rationale for discounting the Meirionnydd Oakwoods and Bats site SAC based on distance.
- 7.3** ChW noted that he probably agreed with the conclusions of the SIAA, subject to the pollution control issue, but not the terminology. There is a need to present the results in terms of likelihood and significance rather than no effect i.e to read "*likelihood of no significant effects*" rather than saying, "*no significant effects*". Regulations look at likelihood of significance but not 'no effect'.
- 7.4** Otter and bat conclusions state 'no pathway' for effect but they are a mobile species (JJ noted they can have a 25km range) and there is the issue of

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connectivity; for habitats stating ‘*no pathways*’ is acceptable, but not for mobile species.

- 7.5** **Action: PW to make changes to the SIAA then send over to Employers Agent for review, then it will be sent onto WG. At the same time a copy will be sent by JHe (WG) to ChW.**

**Arup,  
CH2M,WG  
(JHe)**

- 7.6** ChW advised that the SIAA could be a 2-3 week sign off procedure.

- 7.7** LC’s review periods are currently potentially 4-5 weeks. LC noted that she was on leave for all of October 2016 so would need to receive the ES, the SIAA and the NTS as soon as possible in September 2016.

## **8. Future ELG Engagement and Next Steps**

- 8.1** The next ELG is likely to be held early in KS6 after completion of the Statutory Procedures at the commencement of the construction period. The next ELG will cover site processes, plans and phasing including the ensuring the implementation of the CEMP. It will focus on buildability and the management of the environmental effects.

## **9. AOB**

- 9.1** ELG Members expressed their thanks. No further AOB were noted.