

Welsh Government

**M4 Corridor around Newport**

December 2016 Environmental  
Statement Supplement:  
Appendix SR18.1  
Register of Environmental  
Commitments Update

M4CaN-DJV-EGN-ZG\_GEN-RG-EN-0001

At Issue | December 2016

## Register of Commitments

**Notes:** Under 'Owner', Designer includes Environmental Consultant. Further details of 'when required' are provided at the end of the document.

The Register of Commitments is a draft document until finalised.

The original draft comprising Commitments 1 to 94 inclusive was published on March 10<sup>th</sup> 2016 in the M4CaN Environmental Statement as Appendix 18.1.

Rev A – comprising Commitments 94 to 161 inclusive was published on September 5<sup>th</sup> 2016 in the M4CaN Environmental Statement Supplement as Appendix R18.1.

This draft - Rev B – includes amendments to existing and further commitments required as a result of correspondence between third parties. Those amendments and further commitments are in emboldened text with the latter having a unique reference number greater than 161.

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<b>M4 Corridor Around Newport: The Plan</b>					
1	Climate change implications, such as increased rainfall and warmer summer temperatures, will be considered during the design, construction and maintenance of the highway and highway structures. During scheme development, the design and alignment of the highway will be influenced by the results of a flood consequences assessment, which will consider the potential effects of climate change.	The Plan, p.35				Included in design, see ES Chapter 2 & 16 and Appendix 16.1
2	Sustainable urban drainage systems (SUDS) and porous surfaces will be integrated into the design to reduce the risk of flooding and increase infiltration. Attenuation ponds will be incorporated along the highway to receive surface runoff from the highway. These will be designed to attenuate predicted increases in rainfall thus reducing potential flood risk.	The Plan, p.35				Included in design, see ES Chapter 2 & 16. <b>X-refer also to Commitments 12, 97, 100 &amp; 109</b>

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3	Connectivity will be provided for commuting and foraging protected species; including provision of underpasses, overpasses and lighting strategies as required.	The Plan, p.36				Included in design, see ES Chapter 2 & 10. <b>X-refer also to Commitment 134</b>
4	Attenuation ponds will ensure surface water runoff will meet Water Framework Directive (WFD) and SSSI requirements prior to entering the SSSI reed network.	The Plan, p.36				Included in design, see ES Chapter 2 & 16
5	Scheme design will provide mitigation for both water quality and water volume.	The Plan, p.37				Included in design, see ES Chapter 2 & 16, and Pre-CEMP (ES Appendix 3.2). <b>X-refer also to Commitments 2, 6, 17, 27, 59, 62, 98, 100, 101, 108, 109 &amp; 136</b>
6	Provision of new reens will provide replacement water storage capacity.	The Plan, p.37				Included in design, see ES Chapter 2 & 16. <b>X-refer also to Commitments 2, 5, 17, 27, 59, 62, 98, 100, 101, 108, 109 &amp; 136</b>
<b>Strategic Habitats Regulations Assessment (SHRA)</b>						
7	Effective construction techniques to avoid or minimise noise or vibration. These measures would be set out within the CEMP. <ul style="list-style-type: none"> <li>Integration of 'noise breaks' into the piling programme if required.</li> </ul>	SHRA, p55		Before start of construction		Included in Buildability Report (ES Appendix 3.1) <b>X-refer also to Commitments 11</b>

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	<ul style="list-style-type: none"> <li>Test piling would be undertaken to determine potential vibration effects in advance of any piling works. These measures would be set out in the CEMP.</li> </ul>					<b>&amp; 63</b>
8	Mitigation measures identified to meet conservation objectives of the SHRA with regards to otters: <ul style="list-style-type: none"> <li>Provision of a means of escape for large excavations. These measures would be set out in the CEMP.</li> <li>Provision of replacement holts or hovers if required.</li> </ul>	SHRA, p.55		Before start of construction		Included in design, see ES Chapter 2 & 10 <b>X-refer also to Commitments 126, 140 &amp; 141</b>
9	Mitigation measures identified to meet conservation objectives of the SHRA with regards to the Severn Estuary SAC, SPA and Ramsar Site: <ul style="list-style-type: none"> <li>Effective design to maintain hydrological connectivity of the reen systems during construction and operation.</li> </ul>	SHRA, p.57		Before start of construction		Included in design, see ES Chapter 2 & 16 <b>X-refer also to Commitments 17, 59, 62, 98, 108 &amp; 136</b>
10	Mitigation measures identified to meet conservation objectives of the SHRA with regards to wintering bird assemblages: <ul style="list-style-type: none"> <li>Implementation of effective measures to discourage birds from using construction areas. These measures will be set out in the CEMP.</li> </ul>	SHRA, p.58		Before start of construction		Included in design, see ES Chapter 2 & 10, Buildability Report (ES Appendix 3.1) and Pre-CEMP (ES Appendix 3.2). <b>X-refer also to Commitments 64 &amp; 125</b>
<b>Strategic Environmental Assessment Post-Adoption Statement (SEA PAS)</b>						
11	Noise and Vibration Mitigation Measures: <ul style="list-style-type: none"> <li>Use low noise surfaces to reduce noise pollution, particularly in areas close to population and in sensitive areas;</li> </ul>	SEA PAS, p.32		Before start of construction		Included in design, see ES Chapter 2 & 13, Buildability Report (ES Appendix 3.1) and

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	<ul style="list-style-type: none"> <li>Use noise barriers, bunds and secondary glazing to screen noise sensitive receptors where necessary.</li> <li>Improve performance of noise control during construction and maintenance activities;</li> <li>Manage temporary residual noise effects.</li> <li>Consider noise nuisance when developing speed management strategies, HGV management plans and event management plans.</li> </ul>					Pre-CEMP (ES Appendix 3.2) <b>X-refer also to Commitments 7 &amp; 63</b>
12	Water Mitigation Measures: <ul style="list-style-type: none"> <li>Locate site compounds away from surface water features and watercourses/ Drainage must be designed to avoid transfer of potential spillages to surface and groundwater.</li> </ul>	SEA PAS, p.36		Before start of construction		Included in design, see ES Chapter 2 & 3, Buildability Report (ES Appendix 3.1) and Pre-CEMP (ES Appendix 3.2). <b>X-refer also to Commitments 2, 97, 100 &amp; 109</b>
13	Cultural Heritage Mitigation Measures: <ul style="list-style-type: none"> <li>An Assessment of the Significance of Impacts of Development on Historic Landscape (ASIIDOHL2) would be undertaken at project level to further identify effects on heritage landscape.</li> </ul>	SEA PAS, p.38/39			Completed March 2016	See March 2016 ES Appendix 8.3
14	Landscape and Townscape Mitigation Measures: <ul style="list-style-type: none"> <li>Signage should, where possible, avoid urbanisation of rural areas. Ideally, areas of the scheme across the Gwent Levels would not be lit.</li> </ul>	SEA PAS, p39		Detailed design		Included in design, see ES Chapter 2 & 9
<b>SEA NTS</b>						
15	During any construction works, access to any property, facilities or services would be maintained. Any required	SEA NTS, p19				Included in design, see ES Chapter 2

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	route diversions would aim to maintain good access and connections.					& 3, Buildability Report (ES Appendix 3.1) and Pre-CEMP (ES Appendix 3.2)
16	During construction best practice techniques would be employed to avoid detrimental effects on local water bodies.	SEA NTS, p22				Included in design, see ES Chapter 2 & 16, Buildability Report (ES Appendix 3.1) and Pre-CEMP (ES Appendix 3.2)
<b>WelTAG Stage 1 &amp; 2 Report (Scheme Level)</b>						
17	Main watercourses will be culverted where they coincide with the highway, or minor watercourse and reens may be diverted as required, to maintain water transfer and to provide water storage capacity.	WelTAG Report, p232				Included in design, see ES Chapter 2 & 16. <b>X-refer also to Commitments 2, 5, 6, 9, 27, 59, 62, 98, 100, 101, 108, 109 &amp; 136</b>
<b>DMRB Stage 2 Environmental Report</b>						
18	There would be a commitment to provide alternatives and incorporate provision for pedestrians, cyclists and equestrians that facilitates movement along and across the scheme in accordance with established and planned networks.	DMRB Stage Report, p6				Included in design, see ES Chapter 2 & 14
<b>Environmental Statement</b>						
19	Rights of way would be maintained or diverted wherever practicable during the construction period.	Pre-CEMP S2.3	Contractor PLO	During construction		

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20	Normal working hours would be 0700 to 1900 Monday to Friday and 0700 to <b>1700</b> on Saturdays, excluding public holidays. Any working outside the normal hours would be agreed with the local Environmental Health Officer and local residents would be informed. Site working hours would be closely managed and all operatives and staff would be informed of the site working hours during site induction.	ES Chapter 3 Pre-CEMP S2.4	Contractor PLO	During construction		ES para 3.5.5 and Pre-CEMP para 2.4.1 say 0700 to <u>1700</u> on Saturdays.
21	Temporary fencing would be established around new section of motorway to mark the temporary boundary during the construction phase. Areas out of bounds to construction activities would also be fenced off or suitably demarcated to ensure that plant and machinery cannot enter. The specific type of fencing would be agreed pre-construction with the relevant land owner/tenant/business user.	Pre-CEMP S2.5	Contractor	During construction		
22	The main compound and strategic satellite compounds would have 24-hour security. The compounds would be manned during the day to manage the entry/exit of site vehicles and personnel. At night, the compounds would be secured and patrolled by security guards and/or CCTV	Pre-CEMP S2.6	Contractor	During construction		
23	An Environmental Management System (EMS) would be established for the Scheme and would be managed by the Environmental Clerk and Works/Environmental Manager. The EMS (or its components) will be reviewed every 6 months.	Pre-CEMP S3.1	WG Contractor Designers	During construction		
24	Construction staff will be responsible for adhering to the requirements of all relevant consents/permits etc. A legislation register is provided and will be reviewed and updated during the Scheme as required. Construction activities would be undertaken in accordance with best practice guidelines.	Pre-CEMP S4	Contractors	During construction		
25	Regular liaison and consultation with consultees would	Pre-CEMP	Welsh	During		

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	continue in order to develop and appropriate mitigation.	S4.4	Government Contractor Designer	construction		
95	The Scheme will be constructed in accordance with the design as set out in the ES, the ES Supplement and other relevant design documents.	NRW letter of 04/05/16 (p84)	Welsh Government Contractor Designer	During construction		
96	A CEMP will be produced prior to construction following the basis of the Pre-CEMP. <del>The CEMP will be discussed with NRW prior to implementation.</del> <b>The contractor will discuss and seek to agree the CEMP with NRW, Newport City Council and Monmouthshire County Council, and implement construction activities in accordance with the CEMP.</b>	ES various NRW letter of 04/05/16 (p33 & 92)	Contractor, Designer	Before construction		
97	General inspections and maintenance of the motorway, structures, drainage, WTAs and landscape/soft estate areas would take place regularly	ES Ch 2	Welsh Government	During Operation		<b>X-refer also to Commitments 2, 12, 100 &amp; 109</b>
98	<del>The Existing and replacement reens and field ditches would be managed as they currently are.</del> <b>Replacement reens and ditches would be</b> maintained on a regular basis including clearing out of debris bi-annually.	ES Ch 2	Welsh Government	During Operation		<b>X-refer also to Commitments 92, 5, 6, 17, 27, 59, 62, 100, 101, 108 &amp; 136</b>
99	No works in the no entry zone at the PCB cell on the east side of the Usk Crossing.	ES Ch 2	Contractor	During construction		
100	Welsh Government and the M4CaN contractor will continue to liaise <b>and seek to agree</b> with NRW on the development of the Drainage Strategy (including, but not confined to phasing of reen replacements, detailed culvert designs, use of tilting weirs). <del>and</del> NRW's drainage requirements will be addressed to NRW's satisfaction.	NRW letter of 04/05/16 (p25 & 27)	Welsh Government Contractor, Designer	Pre-construction		<b>X-refer also to Commitments 2, 5, 6, 12, 17, 27, 59, 62, 97, 101, 108, 109 &amp; 136</b>
101	Welsh Government will discuss and agree with NRW management responsibility of the new reens, ditches, culverts and water control devices.	NRW letter of 04/05/16 (p26)	Welsh Government	Before completion		<b>X-refer also to Commitments 2, 5, 6, 12, 17, 27, 59,</b>



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						<b>62, 97, 100, 108, 109 &amp; 136</b>
102	A general environmental monitoring strategy will be developed in conjunction with NRW and other appropriate bodies.		Welsh Government, Designer, Contractor	Pre-construction		
103	As part of a general environmental monitoring strategy trigger levels for ongoing construction and operation monitoring will be agreed and a protocol for reporting any problems quickly.	NRW letter of 04/05/06 (p61)	Designer, Contractor	Pre-construction		
162	<b>During detailed design NRW will be consulted on the required numbers and locations of tilting weirs to be incorporated in the M4CaN Scheme to enable continuation of current water level management practices, and following agreement with Welsh Government these will be provided to NRW's satisfaction.</b>	<b>NRW meeting of 06/09/16 minutes</b>	<b>Designer, Contractor</b>	<b>Detailed design, Construction</b>		
163	<b>During the construction and post construction 5 year aftercare period, ongoing liaison will occur with NRW over the effectiveness of the tilting weirs installed by the contractor as part of the M4CaN scheme in enabling effective water level management. Any significant issues arising attributable to the M4CaN works will be addressed where necessary with the agreement of the Welsh Government.</b>	<b>NRW meeting of 06/09/16 minutes</b>	<b>Designer, Contractor</b>	<b>Aftercare period</b>		
164	<b>During the construction period the contractor will ensure that all watercourses, including culverts within the footprint of the M4CaN Scheme are kept free from blockages.</b>	<b>NRW meeting of 06/09/16 minutes</b>	<b>Contractor</b>	<b>Construction</b>		
<b>Site Access and Traffic</b>						
26	All access and egress points from the local highway to the construction works area would be kept clear and where	Pre-CEMP S6.1	Contractor	During construction		

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	required, wheel wash facilities would be provided to ensure that the highway is kept free of mud. The access points from the local highway would avoid residential areas. <b>A plan of permitted haul routes and access points would be provided to the supply chain to ensure that all deliveries are managed correctly.</b>					
27	The haul roads would be maintained to an adequate condition to ensure they remain fit for use by the appropriate construction vehicles. Temporary pipes would be installed within the existing reens and ditches <b>as appropriate</b> early in the construction programme to maintain connectivity of the watercourses and to provide temporary plant crossings.	Pre-CEMP S6.1	Contractor	During construction		<b>X-refer also to Commitments 2, 5, 6, 17, 59, 62, 98, 100, 101, 108, 109 &amp; 136</b>
28	During construction, surface water runoff from the embankments would be managed by capture and settlement <b>via the site surface water management system</b> before being released to the existing reen system.	Pre-CEMP S6.1	Contractor	During construction		
29	Measures would be adopted to reduce the spread of mud and dust by site vehicles by delivery vehicles. A site speed limit of 10 mph would be imposed and movements of construction traffic around the site would be minimised through the use of designated haul routes.	Pre-CEMP S6.1	Contractor	During construction		
30	Measures to minimise impacts from dust and air quality nuisance would be developed into a Dust Management Plan (DMP), which would be implemented throughout the duration of the construction works.	Pre-CEMP S6.1	Contractor	During construction		
<b>Scheme Construction</b>						
104	All temporary construction works sites would be removed following the completion of works and land would be restored.	ES Ch 3	Contractor	During construction		
105	A Public Liaison Officer (PLO) would be appointed prior to the commencement of works	ES Ch 3 & 10	Contractor	Pre-and during construction		A PLO (Brian Greaves) is in post

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106	<p>Before the commencement of any construction works discussions will take place with NRW and access arrangements agreed whereby NRW can continue to undertake, but not be limited to:</p> <ul style="list-style-type: none"> <li>• routine reen, ditch and flood risk management structure management and maintenance</li> <li>• emergency works, such as blockage removal and repairs to defences</li> <li>• wider compliance and enforcement work within NRW's remit, not directly related to the M4 construction works</li> </ul>	NRW letter of 04/05/16 (p8 & 30)	Contractor	Pre-construction		
107	<b>Subject to health and safety considerations during construction</b> vehicular access would be provided for NRW along the length of the River Ebbw affected by the works, including beneath the west bank under River Ebbw bridge.	NRW letter of 04/05/16 (p9)	Contractor	During construction <b>and operation</b>		
108	The phasing of the construction of new reens, ditches and culverts, and the infilling of existing reens and ditches (including ecological issues) will be discussed with NRW, documented and implemented to their satisfaction.	NRW letter of 04/05/16 (p31)	Contractor, Designer	Pre-construction		<b>X-refer also to Commitments 2, 5, 6, 12, 17, 27, 59, 62, 97, 100, 101, 109 &amp; 136</b>
109	Permanent and construction drainage designs will be reconciled to meet with NRW's requirements.	NRW letter of 04/05/16 (p31)	Contractor, Designer	Pre-construction		<b>X-refer also to Commitments 2, 5, 6, 12, 17, 27, 59, 62, 97, 100, 101, 108 &amp; 136</b>
<b>Air Quality</b>						
31	Communication measures such as the display of contact details of the person(s) responsible for air quality and the development of stakeholder communications plan and a	Pre-CEMP S6.2	Contractor	During construction		

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	Dust Management Plan.					
32	All complaints and incidents relating to dust and air quality would be recorded together with details on how to resolve the situation.	Pre-CEMP S6.2	Contractor PLO	During construction		
33	Inspections would occur regularly (daily in areas close to sensitive receptors) to monitor for compliance with the DMP. Results would be logged and continuous monitoring locations would be agreed with the local planning authority	Pre-CEMP S6.2	Contractor	During construction		
34	Site layout would be planned so machinery and dust causing activities are located as far as possible from receptors.	Pre-CEMP S6.2	Contractor	During construction		
35	Solid screens or barriers would be erected around key construction compounds.	Pre-CEMP S6.2 SIAA S5.4	Contractor	During construction		
36	Construction practices would avoid generating site runoff of water or mud where possible. Fencing, barriers and scaffolding would be kept clean using wet methods.	Pre-CEMP S6.2	Contractor	During construction		
37	Materials that have the potential to produce dust would be removed from the site as soon as possible, unless the materials are being re-used on site, Stockpiles would be covered and/or seeded.	Pre-CEMP S6.2	Contractor	During construction		
38	A procedure would be implemented to ensure that the engines of stationary vehicles are switched off. Where practicable, the use of diesel or petrol powered generators would be avoided and mains electricity or battery powered equipment would be used.	Pre-CEMP S6.2	Contractor	During construction		
39	A maximum speed limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas would be imposed and signposted.	Pre-CEMP S6.2	Contractor	During construction		
40	A Construction Logistics Plan would be prepared and implemented to manage the sustainable delivery of	Pre-CEMP S6.2	Contractor	During construction		

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	materials. Construction staff would be encouraged to use sustainable modes of transport when travelling to the site compounds.					
41	All cutting, grinding or sawing equipment used during construction of the new section of motorway would be fitted with suitable dust suppression techniques. An adequate water supply would be provided for dust/particulate matter suppression.	Pre-CEMP S6.2	Contractor	During construction		
42	Enclosed chutes, conveyors and covered skips would be used. Drop heights from conveyors, loading shovels and other loading or handling equipment would be minimised and fine water sprays would be used where appropriate.	Pre-CEMP S6.2	Contractor	During construction		
43	<u>Measures specific to demolition:</u> <ul style="list-style-type: none"> <li>• Soft strip indie of buildings first, retaining walls and windows where possible.</li> <li>• Effective water suppression is used.</li> <li>• Bag and remove or damp down any biological debris prior to demolition.</li> </ul>	Pre-CEMP S6.2	Contractor	During construction		
44	<u>Measures specific to earthworks:</u> <ul style="list-style-type: none"> <li>• Re-vegetate earthworks and exposed areas/stockpiles as soon as possible. Where this is not possible use hessian or mulches as soon as practicable</li> <li>• During construction works remove the cover in small areas rather than the all at once.</li> </ul>	Pre-CEMP S6.2	Contractor	During construction		
45	<u>Measures specific to construction:</u> <ul style="list-style-type: none"> <li>• Avoid roughening of concrete surfaces (scabbling) if possible.</li> <li>• Ensure sand and other aggregates are stored in banded areas and are not allowed to dry out.</li> <li>• Ensure that bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems.</li> </ul>	Pre-CEMP S6.2	Contractor	During construction		

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	<ul style="list-style-type: none"> <li>Ensure that bags of fine powder materials are sealed after use and stored appropriately.</li> </ul>					
46	<p><u>Measures specific to trackout:</u></p> <ul style="list-style-type: none"> <li>Use water-assisted dust sweepers on the local road to remove, as necessary any material tracked out of the works areas. Dry sweeping of large areas would be avoided.</li> <li>Ensure vehicles entering and leaving the site are covered to prevent the escape of materials during transport.</li> <li>Inspect on-site haul routes for integrity and carry out the necessary repairs to the surface as soon as reasonably practicable. Record all inspections and any subsequent action in a site log book.</li> <li>Install hard surfaced haul routes, which should be regularly dampened down and cleaned.</li> <li>Where reasonably practicable, implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the works area).</li> <li>Where the size/layout of the works area permits, ensure there is an area of hard surfaced road between the wheel wash facility and the work area exit.</li> <li>Access gates to be located at least 10 metres from receptors where possible.</li> </ul>	Pre-CEMP S6.2	Contractor	During construction		
<b>Cultural Heritage</b>						
47	Archaeological and historical features would be protected prior to and during construction.	Pre-CEMP S6.3	Contractor	During construction		
48	Prior to the commencement of construction works, the Archaeological Contractor would prepare a Project Design for the activities identified in the Cultural Heritage	Pre-CEMP S6.3	Designer Archaeological contractor	Before construction		As set out in the Cultural Heritage Mitigation Plan (ES

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	Mitigation Plan (CHMP) including detailed method statements. The Project Design would be submitted and agreed by the Contractor's Archaeologist and the Curator appointed by Welsh Government.	NRW letter of 04/05/16 (p10)	Archaeological Curator			Appendix 8.10)
49	<u>Measures for identified cultural heritage remains:</u> Further information would be gathered at a number of locations (as described in the CHMP) and would involve a number of methodologies as set out in the pre-CEMP and the CHMP. The mitigation would be undertaken by one or more experienced specialist contractors	Pre-CEMP S6.3	Designer Archaeological contractor Archaeological Curator	During construction		As set out in the Cultural Heritage Mitigation Plan (ES Appendix 8.10)
50	<u>Measures for discovered cultural heritage remains:</u> A program of mitigation will be implemented which could result in the identification of previously unknown cultural heritage assets. The Archaeological Contractor would delineate the area and all workers made aware of its presence.  A Further Archaeological Design would be submitted within 5 working days of the discovery which would be agreed by the Contractor's Archaeologist and the Curator prior to the commencement of any mitigation works.	Pre-CEMP S6.3	WG, Contractor, Designer, Archaeological contractor, Archaeological Curator	During construction		As set out in the Cultural Heritage Mitigation Plan (ES Appendix 8.10)
51	At some locations trial trenches would be undertaken in areas <del>within the Gwent Levels</del> where no archaeological fieldwork surveys have been undertaken. The detailed methodology is set out in the CHMP. Upon completion a report would be prepared to describe the results. Any archaeological remains identified would be classed as 'Discovered Cultural Heritage Remains' and a Further Archaeological Design would be produced (as above).	Pre-CEMP S6.3	WG, Contractor, Designer, Archaeological contractor, Archaeological Curator	During construction		As set out in the Cultural Heritage Mitigation Plan (ES Appendix 8.10)
52	Protection of Scheduled Ancient Monument: The standing stone Devil's Quoit would remain in situ and surrounded by a secure fence with appropriate signage.	Pre-CEMP S6.3	Contractor, Designer Archaeological	During construction		As set out in the Cultural Heritage Mitigation Plan (ES

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	The Contractor's Archaeologist would be informed before any works in the vicinity of the monument were undertaken and the works would be authorised by a permit.		contractor Archaeological Curator			Appendix 8.10)
110	Provision of a new public footpath providing access from the B4245 Caldicot Road to the Bronze Age standing stone at Undy and provision of an information board.	ES para 8.8.66	Welsh Government, Designer, Contractor	During construction		
111	Offering the Brooking National Collection the opportunity to acquire fixtures and fittings from the Grade II listed Magor Vicarage ahead of demolition	ES App 10.8	Designer	During construction		
112	Pre-demolition detailed recording of the most significant buildings and the basic recording of the less significant structures as set out in the Cultural Heritage Mitigation Plan (Appendix 8.10 of the ES).	ES App 10.8	Designer	During construction		As set out in the Cultural Heritage Mitigation Plan (ES Appendix 8.10)
113	An integrated programme of historic landscape analysis will be undertaken to offset some of the impacts on the historic landscape.	NRW letter of 04/05/16 (p44)	Designer	Pre-construction		<b>As set out in the Cultural Heritage Mitigation Plan (ES Appendix 8.10)</b>
114	RCAHMMW will be offered the opportunity to record the buildings to be demolished.	Written response to Cadw 05/08/16	Designer	Pre-construction		
115	All relevant documents relating to historic environment provisions will be shared with Cadw.	Written response to Cadw 05/08/16	Designer	At all times		
116	The independent Archaeological Curator should be an MCIfA or work for a ClfA Registered Organisation and should be impartial, qualified, experienced, independent and knowledgeable of the archaeology of the Scheme area.	Written response to Cadw 05/08/16	Welsh Government	At all times		



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165	The additions of GGAT and the independent Archaeological Curator to the list of regulatory bodies and interested parties will be taken forward into the Construction Environmental Management Plan (CEMP) should the Scheme proceed to construction.	Pre-CEMP para 4.4.1	Contractor	Pre-construction		
166	All areas of proposed tree planting that coincide with known archaeological sites will be reviewed to see if open grassland is suitable given the balancing requirements for the Scheme.		Designer	Pre-construction		
167	Consultation will continue with the Conservation Officer at NCC with regard to any aspect of detailed design that is relevant to impacts on designated heritage assets including settings.	NCC letter of 11/5/16	Contractor	Detailed design		
168	The programme for Key Stages 4 and 6 will continue to be developed with a view to early commencement of archaeological investigations wherever possible.		Contractor	Before start of construction		
169	All archaeological investigation works will be subject to approval and sign-off by the independent Archaeological Curator.		Contractor	Detailed design		
<b>Landscape</b>						
53	Existing vegetation would be retained where possible.	Pre-CEMP S6.4	Contractor	During construction		
54	The early re-establishment of vegetation within the highway boundary.	Pre-CEMP S6.4	Contractor	During construction		
55	Re-use the coppiced vegetation wherever possible within the planting areas, especially where a screening function is required.	Pre-CEMP S6.4	Contractor	During construction		
56	Loss of or damage to landscape features (for example, hedges/hedgerows/ hedgebanks, drystone walls, individual veteran trees, woodland, water features or field systems) would be avoided where possible.	Pre-CEMP S6.4	Contractor	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
57	Native species of local provenance would be used wherever possible.	Pre-CEMP S6.4	Contractor	During construction		
58	Careful consideration would be given to the location and design of lighting during construction.	Pre-CEMP S6.4 SIAA S5.4	Contractor	During construction		<b>X-refer also to Commitment 60</b>
117	The 5 year aftercare period for the landscape and ecological elements through an Environmental, Landscape and Ecology Aftercare Plan, the following Handover Environmental Management Plan and the longer-term management regime would be discussed with, <b>and agreement sought with NRW.</b>	ES Ch 2 & 9 NRW letter of 04/05/16 (p93)	Designer, Contractor	During operation		
118	<del>Plant larger tree stock at locations where screening of the scheme from receptors and early integration is the priority.</del> <b>Where screening of the scheme from sensitive receptors and early landscape integration is the priority, larger tree stock will be planted some of which may be sacrificial.</b>	ES Ch 9	Designer	During construction		
<b>Ecology and Nature Conservation</b>						
59	<u>Control Measures</u> <b>Those control and mitigation measures outlined in chapters 2 and 10 of the March 2016 ES, the pre-CEMP section 6.5, the Statement to Inform the Appropriate Assessment section 5.2 will be implemented. They include, but are not limited to, the following:</b> <ul style="list-style-type: none"> <li>No construction activity within the wetted channel of the Rivers Usk and Ebbw.</li> <li>Maintenance of all existing reen connections across the new section of motorway.</li> <li>Provision of water treatment areas to control the volume and quality of water discharged to the reen</li> </ul>	Pre-CEMP S6.5 SIAA S5.2 NRW letter of 04/05/16 <b>ES Ch2 &amp; Ch10</b>	Contractor	During construction		Included in design, see ES Chapter 2 & 10. <b>X-refer also to Commitments 9, 17, 62, 98, 108 &amp; 136</b>

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<p>system.</p> <ul style="list-style-type: none"> <li>• Provision of eel passes on all new sluices.</li> <li>• Provision of mammal crossings and ledges within culvert design.</li> <li>• Provision of mammal exclusion fencing along construction and operational areas. Mammal crossings would be provided were necessary.</li> <li>• Ecological enhancement of land at Maerdy Farm.</li> <li>• Use of woodland soils and rootstocks in planting areas.</li> </ul>					
60	<p>Construction lighting would be designed and positioned to minimise light spill outside the working area, <del>in particular watercourses, reens and adjoining habitats.</del></p>	<p>Pre-CEMP S6.5</p> <p>SIAA S5, S6</p>	Contractor	During construction		<b>X-refer also to Commitment 58</b>
61	<p>At Berryhill Farm, during clearance of the existing wood, to the extent practicable, coppice stools of hazel and other shrub species would be lifted and replanted in areas of woodland planting to the east of New Park Farm north of the new Castleton Junction in an area which would not otherwise be disturbed. Woodland topsoil from this wood would also be stripped and placed in new planting areas to encourage the establishment of the woodland ground flora.</p>	Pre-CEMP S6.5	Contractor Ecological contractor	During construction		
62	<p><u>Reens</u></p> <ul style="list-style-type: none"> <li>• The methodology <b>and scheduling</b> for the excavation <b>of replacement reens and ditches</b>, and installation for new culverts along reens and selected field ditches is described in the Buildability Report for Levels Section (<b>March 2016 ES and December 2016 ESS</b> Appendix 3.1).</li> <li>• Where practicable, the layout of areas of land</li> </ul>	Pre-CEMP S6.5	Contractor Ecological contractor	During construction		<b>X-refer also to Commitments 2, 5, 6, 9, 17, 27, 59, 62, 98, 100, 101, 108, 109 &amp; 136</b>

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<p>identified for temporary construction areas would avoid existing reens and ditches.</p> <ul style="list-style-type: none"> <li>• Subject to approval by NRW, the process of recolonisation of replacement reens and ditches by aquatic vegetation and invertebrates would include the use of materials removed from other reens.</li> <li>• Any watercourses permanently severed from the network consideration would be given to the translocation of fish.</li> <li>• Care would be given to avoid trapping fish during dewatering of reens.</li> </ul>					
63	<p>Subject to further discussion piling to install the cofferdam and pylon piles for the east pylon of the River Usk Crossing would be scheduled to avoid the period of highest sensitivity for underwater noise related impacts on migratory fish in the River Usk (March to June inclusive). Piling activities would not take place one hour either side of high water.</p>	<p>Pre-CEMP S6.5</p> <p>SIAA S5.2. S6.2</p> <p>NRW letter of 04/05/16 (p16)</p>	Contractor	During construction		<b>X-refer also to Commitment 151</b>
64	<p><u>Breeding-Birds</u></p> <ul style="list-style-type: none"> <li>• No habitat containing an active nest would be disturbed and appropriate measures to protect any active nest would be set in place as directed by an appropriately experienced ecologist. Buffer zones will be implemented and maintained until it is confirmed that the young have fully fledged.</li> <li>• Management of vegetation which may have the potential to be of value to breeding birds would be undertaken outside of the breeding season (March to August inclusive). When this is not possible a visual inspection for active nests would be undertaken immediately prior to works being carried out. When a</li> </ul>	Pre-CEMP S6.5	Contractor Ecological contractor	During construction		<b>X-refer also to Commitments 10, &amp; 125</b>

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	visual inspection is not possible a dawn to 9am survey will be undertaken. If it is inconclusive as to whether an active nest is present a precautionary approach will be assumed.					
64a	<p><u>Bats</u>  <b>In accordance with the Bat Mitigation Strategy</b></p> <ul style="list-style-type: none"> <li>Where management of mature trees is required, a survey in order to assess the potential value for roosting bats would be undertaken prior to the commencement of works and an NRW licence would be required if a roost is present.</li> <li>Felling of trees and demolition of buildings of known or probable value to roosting bats would be undertaken in accordance with a European Protected Species Licence, which would be obtained prior to the commencement of the works. Pre-construction surveys would be undertaken to determine the presence of roosts.</li> <li>Replacement bat roosts would be provided including bat boxes and bat houses.</li> <li>The construction of crossing points and planting of landscaping would be carried out as soon as practicable during construction. Artificial bat corridors would be used prior to planting becoming established.</li> </ul>	<p>Pre-CEMP S6.5                      ES Ch 10                      SIAA S5.6</p>	Contractor	During construction		<p><b>X-refer also to Commitments 120, 130, 137, 140 &amp; 141</b></p>
65	<p><u>Water Voles</u>                      For all watercourses known to support water voles, a detailed method statement would be agreed with NRW and, as necessary, an NRW licence would be obtained prior to the commencement of works. Prior to any works commencing within 8m of a watercourse, a survey will be undertaken to identify if water voles or their burrows are present.</p>	Pre-CEMP S6.5	Designer, Ecological contractor	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
66	<u>Dormouse</u> The trapping and translocation of dormice would be undertaken in accordance with a European Protected Species licence and associated method statement. Where no receptor site (as approved by NRW) is found then dormice would be cared for in captivity until a suitable habitat has been enhanced or created.	Pre-CEMP S6.5	Designer, Ecological contractor	During construction		
67	<u>Badgers</u> Three artificial setts would be created prior to the closure of three known active sets in accordance to the requirements of an NRW licence. Pre-construction surveys will identify any new setts or badger activity and artificial setts would be provided for any further displaced badgers.	Pre-CEMP S6.5	Designer, Ecological contractor, Contractor	Before main construction		
68	The measures set out in the Gwent Levels SSSI Mitigation Strategy will be agreed with NRW, and once agreed will be implemented <b>in accordance with the strategy</b> .	Pre-CEMP S6.5 SIAA S5.4	Designer, Ecological contractor, Contractor	Before main construction		As set out in SSSI Mitigation Strategy ( <b>December 2016 ESS Appendix SR10.35</b> )
119	<u>Biosecurity</u> Works (including surveys and monitoring visits) would be undertaken in accordance with a biosecurity risk assessment and safe system of work, a copy of which would be included in the CEMP following the principles set out in the Pre-CEMP (Appendix 3.2). The risk assessment and safe system of work would take into account species-specific guidelines for management and control of non-native invasive species produced by the Non-Native Species Secretariat (NNSS) and NRW.	ES Ch 10 NRW letter of 04/05/16 (p35 & 92)	Designer, Ecological contractor, Contractor	Before main construction		
120	Further bat surveys will be undertaken to further inform the detail of any European Protected Species Licence.	ES Ch 10	Designer	In 2016		<b>X-refer also to Commitments 64a, 130, 137, 140 &amp; 141</b>

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
121	<p><u>Barn Owl</u></p> <ul style="list-style-type: none"> <li>Further survey will be carried out pre-construction to confirm the status of any potential barn owl nest sites.</li> <li><b>Subject to the findings of the above</b> Barn owl nest boxes would be provided in trees around the boundaries of the mitigation land at Green Moor (chainage 17900 to 19100) in the same area as the potential barn owl nest but further from the construction area and also within the SSSI mitigation areas (Appendix 10.35).</li> </ul>	ES Ch 10	Designer	Pre-construction		
122	<p><u>Water vole</u></p> <p>Mitigation measures designed to displace or translocate water voles from working areas (excluding temporary access routes) to favourable receptor sites prior to the commencement of construction would be set in place in accordance with a water vole Method Statement. The exact area of clearance at any location would be determined with regard to habitats and the type of land use and would be agreed with NRW.</p>	ES Ch 10	Designer Ecological contractor	Before main construction		
123	<p>Further dormouse survey will be carried out in 2016 to inform the detail of the European Protected Species Licence Method Statement.</p>	ES Ch 10	Designer	In 2016		
124	<p><u>Great Crested Newt</u></p> <ul style="list-style-type: none"> <li>In those areas where great crested newt presence was indicated by the eDNA technique, where necessary, population assessment will be carried out in 2016 by conventional survey techniques to further inform appropriate mitigation and the Method Statement to support any European Protected Species licence application.</li> <li>Capture and translocation of great crested newt and associated protection measures <b>will be implemented in accordance with the licence.</b></li> </ul>	ES Ch 10	Designer	In 2016	Sept 2016	Reported in the <b>September 2016</b> ES Supplement

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125	<p><u>Winter Birds</u>                      A winter bird survey for 2015/2016 will be reported to provide data for two full winters.</p>	ES Ch 10	Designer	In 2016	Sept 2016	Reported in the ES Supplement. <b>X-refer also to Commitments 10 &amp; 64</b>
126	<p><u>Otter</u></p> <ul style="list-style-type: none"> <li>• Further otter survey will be carried out in advance of construction and will inform the detail of any European Protected Species Licence Method Statement.</li> <li>• The works area within the boundary of the River Usk SAC would be kept to the very minimum required.</li> <li>• Site inductions and toolbox talks would include all relevant measures required to protect retained habitat of potential value to otters in the SAC, including the retained habitat corridor along/alongside the channel of the River Usk.</li> <li>• Post-construction habitat replacement as shown on Figure 2.6, Volume 2 and described in Section 10.5 of the ES.</li> <li>• Retained habitat surrounding holts and other potential resting places would be protected through works-free buffer zones, fenced as necessary (using construction and/or mammal exclusion fencing).</li> <li>• An emergency procedure protocol to use in the event of encountering an otter or potential otter rest/holt would be given to contractors. Should measures not be possible or practicable the appropriate licences would be obtained from NRW.</li> </ul>	ES Ch 10 SIAA S5.2	Designer, Contractor	Pre-construction		
127	<p><u>Reptiles</u></p> <ul style="list-style-type: none"> <li>• Prior to commencement of construction in areas where common lizard and slow worm populations have been identified, reptile fencing would be installed and reptiles would be captured and transferred to suitable</li> </ul>	ES Ch 10 NRW letter of 04/05/16 (p55)	Designer, Contractor	Pre-construction		



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	<p>habitat on the margin of the Scheme, or to suitable habitat within the SSSI mitigation areas (Appendix 10.35) or elsewhere by agreement. The detailed method statement for the capture and translocation would be agreed with NRW in advance.</p> <ul style="list-style-type: none"> <li>Features of potential importance to grass snakes, such as leaf piles, would be identified and where these would be affected by the Scheme would be moved to suitable locations at the Scheme boundary or elsewhere by agreement.</li> </ul>					
128	Any excavations that are located outside the mammal exclusion fencing that are more than 0.5 m deep would be fenced individually; covered overnight where practicable; walls would be re-profiled so as to enable mammals and other wildlife to walk out of the excavation; or a means of escape would be provided.	ES Ch 10 SIAA S5.2	Contractor	During construction		
129	<u>Waxcap turf</u> The potential for the translocation of waxcap turf from grasslands at Pwll Diwaelod and Pound Hillll would be investigated.	ES Ch 10				
130	<u>Monitoring</u> <ul style="list-style-type: none"> <li>Monitoring would be undertaken both during the construction and <b>the first 5 years after opening operation</b> of the new section of motorway to confirm the effectiveness of mitigation measures, and if necessary, to inform the need for any changes in management of impacts.</li> <li>The mammal exclusion fencing would be monitored throughout the construction phase to ensure that it remains intact. The ECoW would be responsible for ensuring regular monitoring is undertaken and that repairs are made as soon as practicable.</li> <li>The establishment of the landscape elements included</li> </ul>	ES Ch10 SIAA S5, S6	Designer, Contractor	During construction and operation		<b>X-refer also to Commitments 64a, 120, 137, 140 141 &amp; 161</b>

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	<p>in the EMP (Figure 2.6) would be monitored by the Contractor during the construction and maintenance periods. South Wales Trunk Road Agent (SWTRA) would then be responsible for ongoing monitoring and maintenance.</p> <ul style="list-style-type: none"> <li>Requirements for monitoring of protected species would be set out in the European Protected Species Licence Method Statements and other species Method Statements. This would include monitoring of populations of dormouse, bats, water vole, badger and shrill carder bee.</li> <li><b>Background Baseline</b> underwater noise levels in the vicinity of the Usk crossing <b>will be undertaken prior to works commencing.</b> and Monitoring of underwater noise levels during vibropiling will be undertaken <b>during significant construction activity.</b></li> </ul>					
131	An Environmental Liaison Group (ELG) would be established that would consist of key stakeholders	ES Chapter 10	Designer	At all times		ELG is already established
132	An Environmental Co-ordinator would be appointed for the scheme and would have the primary responsibility for managing environmental issues and ensuring commitments included in the commitments register are included in the CEMP.	Pre-CEMP S7.2 ES Ch 10	Designer	At all times		An Environmental Co-ordinator is already appointed
133	Minimise land take within the Gwent Levels SSSIs, and where practical, avoid land take to the south of the line of the new motorway	ES Ch 10	Designer, Contractor	Pre- and during construction		
134	An appropriate Lighting strategy would be implemented to avoid lighting of the new section of motorway except at junctions and river crossings. Lighting of the River Usk and Ebbw crossings would avoid lighting of the river channel.	ES Ch 10 SIAA S5.2	Designer	Pre-construction		A Lighting Strategy has been prepared. <b>X-refer also to Commitment 3</b>
135	Landscape and habitat provisions will be delivered as shown on the Environmental Masterplan (EMP).	ES Ch 10	Designer, Contractor	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
136	The Reen Mitigation strategy will be implemented to minimise impacts on the Reens.	ES Ch 10 SIAA S5.5. S5.4	Contractor	During construction		<b>X-refer also to Commitments 2, 5, 6, 9, 17, 27, 59, 62, 98, 100, 101, 108, 109 &amp; 136</b>
137	Bats The following ratio of replacement bat habitat creation would be included: <ul style="list-style-type: none"> <li>Unimproved grassland – 7.10 hectares lost: 26.11 hectares of species-rich grassland replacement.</li> <li>Marshy grassland - 6.86 hectares lost: 13.37 hectares of wet grassland replacement.</li> </ul>	SIAA S5.6	Designer, Contractor	During construction		<b>X-refer also to Commitments 64a, 120, 130, 140 &amp; 141</b>
138	Migratory Fish Measures included in the Surface Water Management Plan, Pollution Prevention Plan and best practice guidelines will be implemented to avoid adverse effects on migrating fish from pollution.	SIAA S 5 NRW letter of 04/05/16 (p15)	Designer, Contractor	During construction		
139	Proposals for the prevention of pollution, both during the construction and operational phases of the new section of motorway, as set out in the SIAA and ES will be fully implemented.	SIAA paras 5.2.14 to 5.2.27 NRW letter of 04/05/16 (p15)	Contractor	During construction		
140	Mitigation strategies and/or method statements, either as part of the ghost licence applications or as standalone reports, will be prepared in respect of dormice, great crested newt, bats, otter, water vole, badger and reptiles.	NRW letter of 04/05/16 (p55)	Designer	In 2016		<b>X-refer also to Commitments 64a, 120, 130, 137, &amp; 141</b>
141	Ghost licence applications will be prepared and submitted to NRW in respect of dormice, great crested newt, bats, and otter.	NRW letter of 04/05/16 (p56)	Designer	In 2016		<b>X-refer also to Commitments 64a, 120, 130, 137 &amp; 140</b>

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142	An environmental monitoring strategy for the construction and operational phases will be developed, discussed and agreed with NRW. The strategy will be implemented accordingly.	NRW letter of 04/05/16 (p61)	Designer, Contractor	Pre-construction		
143	Once finalised and agreed with NRW the SSSI Mitigation Strategy will be implemented accordingly.	NRW letter of 04/05/16 (p71)	Designer, Contractor	During construction		
144	A Dormouse Management Plan will be prepared and implemented		Designer	Pre-construction		
<b>Geology and Soils</b>						
69	<p><b>Pollution Control</b></p> <ul style="list-style-type: none"> <li>Fuel, oil and chemicals would be stored in designated and secure locations within the compounds preventing access by mammals. The storage areas (which would also house the ancillary equipment) would be bunded and lined with an impervious material and have a capacity of 110% of the volume stored.</li> <li>Secondary containment for drum storage would have a capacity of at least 25% of the drum volume.</li> <li>Where possible, fuel, oil and chemical storage areas would not be located within 10 metres of a watercourse or 50 metres of a borehole, well or spring, and would be above any flood water level. Leaking, damaged or empty drums would be removed from the compounds/working areas as soon as possible, and disposed via a registered waste disposal contractor.</li> <li>Spill kits (containing sand or absorbent materials) would be kept close to the storage area. Staff would be trained on how to use the spill kits. Once used, the sand/absorbent material would be disposed via a</li> </ul>	Pre-CEMP S6.6 SIAA S5.2	Contractor	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<p>registered waste disposal contractor.</p> <ul style="list-style-type: none"> <li>• Refuelling of plant would be undertaken in designated areas on an impermeable surface away from drains or watercourses. All refuelling and bulk deliveries would be supervised, and staff and contractors would receive incident response training. Hoses, valves and pipework would be regularly checked for signs of wear and tear and corrosion.</li> <li>• Security measures would be provided for the storage areas to prevent vandalism and theft. Storage system valves, taps and delivery hoses would be fitted with locks and locked shut when not in use.</li> <li>• Used oils would be stored, transported and disposed of via a registered waste contractor.</li> </ul>					
70	<p><b>Soils</b></p> <ul style="list-style-type: none"> <li>• A Soil Handling Methodology would be prepared for the new section of motorway following the guidance in Defra’s Good Practice Guide for Handling Soils (Defra, 2000) and Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009).</li> <li>• Topsoil and subsoils would be stripped separately according to specified depths. The timing of soil stripping and handling operations would avoid periods of the wet weather. Multiple handling of soil materials would be minimised to avoid the risk damaging the soil structure. Appropriate soil handling equipment would be used.</li> <li>• Topsoil and subsoil would be stored in separate stockpiles. The stockpiles would be a maximum height</li> </ul>	Pre-CEMP S6.6 ES Ch 11	Designer, Contractor	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<p>of 3 metres (topsoil) and 5 metres (subsoil) and an appropriate slope. The location of the stockpiles would be designed to keep the topsoil and subsoil separate and would not be positioned within the root or crown spread of trees, or adjacent to ditches, watercourses or existing or future excavations.</p> <ul style="list-style-type: none"> <li>The stockpiles would be cordoned off from the rest of the works area and protected from construction activities and traffic. Once prepared, the stockpiles would be seeded using a standard Rye Grass seed mix.</li> <li><b>Where practicable</b> the topsoil from the storage areas would not be stripped, but instead the topsoil would be protected in situ by geo-textile matting.</li> </ul>					
71	<p><b>Contaminated Land</b>  <b>The Outline Remediation Strategy Report would be finalised and approval sought from NRW, MCC and NCC prior to construction.</b></p> <ul style="list-style-type: none"> <li>Where practicable (i.e. where the materials are geotechnically suitable and do not pose an unacceptable risk to human health or the environment) contaminated materials would be retained and reused within the construction of the new section of motorway. The Remediation Strategy <b>Report</b> would set out the approach for assessing if the material would be suitable for reuse with or without treatment. <b>It would also set out the treatment and procedures required to ensure any wastes are appropriately treated to ensure they are 'fully recovered'</b>. The strategy would be implemented using a Materials Management</li> </ul>	<p>Pre-CEMP S6.6                      NRW letter of 04/05/16</p>	<p>Designer, Contractor</p>	<p>During construction</p>		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<p>Plan (MMP) <b>where appropriate and submitted to NRW in line with the CL:AIRE Definition of Waste Code of Practice.</b></p> <ul style="list-style-type: none"> <li>• If previously unidentified areas of contaminated land are discovered the procedure would require works to be stopped immediately and the area would be secured to prevent access to site workers, plant and equipment and to prevent the spread of contaminants. Site workers would be given training on how to identify potential contamination.</li> <li>• The Local Authority and NRW would be notified and consulted on the proposed measures to deal with the contamination; <b>those measures to be agreed and implemented accordingly.</b></li> <li>• Where it has been agreed by the Local Authority and NRW for works to continue, materials would be managed to minimise the risk of cross contamination.</li> </ul>					
72	An Unexploded Ordnance Mitigation Strategy would be developed using guidance from 'Unexploded Ordnance: A Guide for the Construction Industry' (CIRIA, 2009).	Pre-CEMP S6.6	Designer, Contractor	Pre-construction		
145	With respect to areas of contaminated land monitoring of <b>gas</b> , groundwater, surface waters and slope stability would continue for 5 years after the completion of construction. <b>The monitoring requirements would be set out in the Remediation Strategy and approval sought from NRW.</b>	ES Ch 11	Designer, Contractor	During operation		
146	<del>Production of</del> <b>A Remediation Verification Report will be prepared following completion of construction.</b>	ES Ch 11	Designer	Post construction		
147	The principles of a 'discovery strategy' in relation to how any previously unidentified contamination would be dealt with <del>will be agreed to NRW's satisfaction</del> <b>will be set out</b>	NRW letter of 04/05/16 (p32)	Contractor	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<b>within the Remediation Strategy Report.</b>					
<b>Waste and Materials Management</b>						
73	Opportunities to re-use site won materials would be maximised in accordance with the waste hierarchy defined within the Waste Framework Directive. The re-use of site won materials would be subject to compliance with relevant specification and assessment criteria to ensure engineering suitability and protection of environmental receptors. The assessment criteria would be agreed with the regulators.	Pre-CEMP S6.7	Contractor	During construction		
74	Where necessary, materials would be treated and processed on site to render them suitable for use.	Pre-CEMP S6.7	Contractor	During construction		
75	The re-use of materials would be undertaken in accordance with the Materials Management Plan, which details the assessment criteria for material re-use and details of the proposed locations where materials would be re-used.	Pre-CEMP S6.7	Contractor	During construction		
76	Materials which have to be imported from off site would be sourced from local suppliers where possible. Imported materials are likely to include materials for road pavement construction, aggregates, reinforcing and structural steelwork and concrete.	Pre-CEMP S6.7	Contractor	During construction		
77	Materials that are classified as waste would be managed in accordance with the requirements of the relevant waste management legislation and the 'Duty of Care' obligations.	Pre-CEMP S6.7	Contractor	During construction		
78	The Outline Site Waste Management Plan (SWMP) is a living document which would be updated during detailed design stage and would be implemented during construction. All waste would be managed in accordance to the SWMP and documents would be retained for all waste movement.	Pre-CEMP S6.7	Contractor	During construction		



Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
79	Monitoring of the materials used and waste generated from the construction of the new section of motorway would be monitored throughout the construction period through the SWMP and MMP.	Pre-CEMP S6.7	Contractor	During construction		
148	When unavoidable, transport of materials will be limited to off peak usage on the existing M4 and surrounding local road network.	ES Ch 12	Contractor	During construction		
<b>Noise and Vibration</b>						
80	Noise monitoring (and vibration monitoring where appropriate) <del>would</del> <b>will</b> be carried out as appropriate at or <del>around</del> <b>in the vicinity of potentially significantly affected</b> residential properties during the construction phase.	Pre-CEMP S6.8	Contractor	During construction		
81	<b>Prior consent for work on construction sites (CoPA 1974 Chapter 40, Part III, s.61)</b> Approval would be sought from Newport City Council's Environmental Health Officer, or other regulators, as appropriate to the specific area <b>and required works</b> , in advance of the works commencing. Where the works are agreed, affected residents would be notified of the programme for the intended works <b>and advised of progress during the works.</b>	Pre-CEMP S6.8	Contractor	<b>Pre and during construction</b>		
82	Standard best-practice construction working methods <b>and plant choice and use</b> would be adopted during the construction phase <b>to constitute Best Practicable Means.</b>	Pre-CEMP S6.8	Contractor	During construction		
149	A 0.9m solid barrier along central reservation is included in the noise model <b>and will be constructed along the central reservation between the main M4 carriageways.</b>	ES Ch 13	<b>Contractor</b>	<b>During construction</b>		
150	The exact locations, alignments, heights and specification of noise barriers <del>to</del> <b>will</b> be developed during the detailed design phase.	ES Ch 13	Designer	Detailed design		

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151	<del>Programming of</del> <b>Where practicable</b> works in sensitive ecological areas will be <b>programmed</b> times to avoid <b>causing</b> noise <del>or</del> and vibration disturbance <b>during sensitive periods of the year as determined for the species potentially affected.</b>	SIAA S5	Designer, Contractor	During construction		<b>X-refer also to Commitment 63</b>
<b>All Travellers</b>						
152	<del>Provision of</del> A temporary diversion for the Wales Coast Path and National Cycle Route 4 during construction <b>will be provided</b> ( <del>paragraphs 14.9.1 and 14.9.2</del> ).	ES Ch 14 paragraphs 14.9.1 & 14.9.2	Contractor	During construction		
153	Temporary diversions would be put in place during construction to mitigate the effects on public footpaths 390/11; 390/15; 390/14; 390/17 and 390/23 ( <del>paragraph 14.9.3</del> ).	ES Ch 14 paragraph 14.9.3	Contractor	During construction		
170	<b>Permanent public rights of way diversions will be implemented as shown in the draft Orders and the March 2016 ES.</b>			<b>During construction</b>		
171	<b>Prior to construction a Rights of Way Interface Plan will be prepared, and then implemented during construction, by the contractor detailing how the interface between walkers and other NMUs and construction activities will be managed during the construction period. NRW, Newport City Council, Monmouthshire County Council and Sustrans will be consulted on the plan.</b>	NRW mtg of 13/9/16	Contractor	<b>Before start of construction During construction</b>		
172	<b>Prior to construction consultation on the detailed design of public rights of way (surfacing etc.) and associated infrastructure (bridges, signage etc.) will be undertaken with NRW, Newport City Council, Monmouthshire County Council and Sustrans. This will take into account the various countryside access design standards of the relevant local authority and</b>	MCC	Designer	<b>Before start of construction</b>		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	<b>active travel guidance where appropriate.</b>					
<b>Community and Private Assets</b>						
83	Agricultural land temporarily used for the construction of the new section of motorway would be reinstated to its former use on completion of the construction period to minimise the effect on farm holdings.	Pre-CEMP S6.9	Contractor	During construction		
84	Farm access points would be maintained wherever possible to limit the short-term severance of accesses to farm buildings and land. Where this is not possible, alternative accesses would be provided early in the construction process.	Pre-CEMP S6.9	Contractor	During construction		
85	Essential services would be maintained throughout the construction period.	Pre-CEMP S6.9	Contractor	During construction		
86	To minimise the risk of disease transmission between farm holdings, best practice construction procedures would be implemented to maintain bio-security.	Pre-CEMP S6.9	Contractor	During construction		
87	Best practice construction procedures would be implemented to reduce the impacts of dust and noise on crops and livestock.	Pre-CEMP S6.9	Contractor	During construction		
88	To minimise the financial loss to the farmer as a result of the removal of land from agri-environmental schemes (and the effectiveness of the scheme), restored agricultural land (temporarily used for construction) would be reintegrated into the agri-environment scheme following consultation with NRW.	Pre-CEMP S6.9	Designer, Contractor	During construction		
154	<del>Provision of</del> Exchange land for the temporary and permanent loss of common land along the River Ebbw <b>will be provided.</b>	ES Ch 15	Welsh Government	During construction		
155	New allotments to mitigate the partial loss of the Green Moor Lane allotments at Magor would be provided.	ES Ch 15	Welsh Government	During construction		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
156	Adjustments to the construction programme to accommodate harvesting of crops would be made wherever possible.	ES Ch 15	Contractor	During construction		
<b>Road Drainage and the Water Environment</b>						
89	The mitigation measures outlined in the following documents (appended to the Pre-CEMP) <u>will be agreed with NRW</u> and implemented throughout the Scheme: <ul style="list-style-type: none"> <li>• Pollution Prevention Plan</li> <li>• (Contamination) Discovery Strategy</li> <li>• Surface Water Management Plan</li> <li>• Groundwater Management Plan</li> <li>• Remediation Strategy Report</li> <li>• Piling Risk Assessment</li> </ul>	Pre-CEMP S6.10  SIAA S5, S6  NRW letter of 04/05/16 (p92)	Contractor	During construction		
157	A water sampling regime would be implemented to ensure the settled water achieves the required turbidity parameters.	ES Ch 3 & 16	Designer, Contractor	During operation		
158	Pre-construction water quality monitoring would be undertaken at key locations which would be developed through the SWMP.	SIAA S6	Designer	Pre-construction		
159	Water quality ( <b>determinands to be agreed with NRW</b> ) would continue to be monitored for <del>at least 12 months</del> <b>5 years</b> of operational use of the new section of motorway to demonstrate acceptable quality of the water treatment area discharges.	ES Ch 16 NRW letter of 04/05/16 (p85) <b>NRW mtg of 06/09/16</b>	Designer	Post construction		
173	<b>Water quality (determinands to be agreed with NRW) would be monitored during the construction of the new section of motorway</b>	<b>Following NRW review 10/11/16</b>	<b>Designer Contractor</b>	<b>During construction</b>		
174	<b>A drainage inspection and maintenance schedule of all grass lined channels and water treatment areas, to</b>	<b>Various meetings</b>	<b>Contractor</b>	<b>Before completion</b>		

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
	be agreed with NRW, will be undertaken in accordance with requirements as set out in Design Manual for Roads and Bridges, Volume 4 Section 2 Part 1: (HA103/06) Vegetated drainage systems for highways runoff.	with NRW				
175	Prior to construction the ECI Contractor will agree arrangements with NRW to enable NRW to undertake its water management duties throughout the Scheme footprint, and those arrangements will be adhered to during construction.	Various meetings with NRW	Contractor	Before and during construction		
<b>Environmental Management</b>						
160	The environmental mitigation, including the requirements set out in the ES, the Assessment of the Impacts upon European Sites (AIES) and the Environmental Commitments Register, would be monitored on a regular basis throughout the five year aftercare period.	ES para 18.8.2	Designer, Contractor	Post construction		
161	The aftercare period for the first 5 years (Month of opening + 5yrs) would be the responsibility of the contractor and is covered by the Environmental, Landscape and Ecology Aftercare Plan (ELEAP). Thereafter responsibility for the ongoing long term maintenance would shift to Welsh Government's highway maintenance contractor (currently SWTRA). The Handover Environmental Management Plan (HEMP) would set out the proposed strategy for the future maintenance and management of the environmental mitigation measures for the following 10 year period (Month of opening + 15yrs). NRW would be consulted on both the ELEAP and the HEMP.	ES section 18.8 & 18.9 NRW letter of 04/05/16 (p24, 93)	Welsh Government	Post construction		
<b>Emergency Response Plan</b>						

Ref No	Commitment	Source	Owner, Action Document	When Required	Date of Completion	Objectives/ Actions/Notes
90	A Pollution Incident Emergency Response Plan would be developed in accordance with relevant guidance.	Pre-CEMP S6.10	Contractor	During construction		
91	Emergency procedures would be developed to support the Response Plan. The procedures would define the circumstances when the plan should be activated and include, the names and contact details of staff trained in incident response, clearly defined roles and responsibilities, the types and location of emergency response equipment available, and procedures for recovering spilled product.	Pre-CEMP S6.10	Contractor	During construction		
92	All relevant staff would be trained in how and when to contact the emergency services, NRW and other organisations identified in the Response Plan.	Pre-CEMP S6.10	Contractor	During construction		
93	In the event of an emergency, members of the public would be able to contact the site via the 24-hour helpline.	Pre-CEMP S6.10	Contractor PLO	During construction		
<b>Training</b>						
94	All construction staff, including sub-contractors, would receive structured training on the requirements of the Pre-CEMP and the associated environmental control plans. Records of training and those attended would be retained	Pre-CEMP	Designer, Contractor	During construction		

Notes:

- The following terms in the 'When required' column mean:
  - In 2016 – during 2016
  - Before start of construction – before the start of KS6
  - Detailed design – during KS4 and KS6
  - Pre-construction – toward the end of KS4, or during the early part of KS6
  - Before main construction – during the early part of KS6
  - During construction – any time during KS6

Before completion – before the Scheme is open to traffic  
Post construction – within 18 months of the Scheme being open to traffic  
**Aftercare period – during the contractor's 5 year aftercare period**  
During operation – when the Scheme fully operational