

REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS

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	Pulldown	Pulldown						Pulldown	Add as necessary	Description	Description	Pulldown	ES Chapter								Section of text
	A	1	Agriculture		Water supplies and underfield drainage adversely effected by the scheme will be replaced or repaired where possible and new connections provided in accordance with commitments made in responses to objections	To maintain the current condition of farmland	Env Statement	12	.6				Other	As set out in Responses to objections	Contractor's team	Construction	Mitigation	Installation of replacement or repair			
	A	2	Agriculture	All Travellers	A farm underpass is to be provided for Pentroydin Fach at chnage 2+61D.	To maintain connectivity for the farm	Env Statement	12					Env Statement	chapter 15							
	AQ	1	Air Quality		Develop and implement a stakeholder communications plan that includes community engagement before work commences on site	Early communication relating to dust issues that may arise during the construction phase.	Env Statement	13	.11				CEMP		Contractor's team	Pre-construction	Avoidance	Prepare stakeholder communication plan to be managed by the PLO and Community Liaison Manager			
	AQ	2	Air Quality		Display the name and contact details of persons accountable for air quality and dust issues arise	To allow members of public to get in touch with the appropriate person if dust issues arise	Env Statement	13	.11				Masterplan		Contractor's team	Construction	Avoidance	Inform stakeholder in emails, leaflets and other public information, alongside the contact details for other potential environmental nuisances.			
	AQ	3	Air Quality		Display the head and regional office contact information	To allow open engagement with the community	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Inform stakeholder in emails, leaflets and other public information, alongside the contact details for other potential environmental nuisances.			
	AQ	4	Air Quality		Develop and implement a dust management plan, which will include measures to control other emissions, approved by the local authority	A dust control document, outlining safeguards to be implemented on site to control dust generation and spread, which can be approved by the local authority who will be responsible for any dust nuisance should this arise	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Prepare method statements and implement through the contractor's PMP.			
	AQ	5	Air Quality		Record all dust and air quality complaints, identify causes, take appropriate measures to reduce emissions in a timely manner and record the measures taken	To ensure all complaints are investigated thoroughly and to reduce the risk of future issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Maintain a complaints register to be maintained on site by the contractor's representatives.			
	AQ	6	Air Quality		Make the complaints log available to the local authority when asked	To provide open and transparent engagement with the local authority and to allow the local authority to cross-reference any complaints they may receive direct from the local community	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Make complaints register available for public scrutiny			
	AQ	7	Air Quality		Record any exceptional incidents that cause dust and/or air emissions, either on-site or off-site and the action taken to resolve the situation in the log book.	Good record keeping is beneficial should any complaints arise	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Maintain a complaints register to be maintained on site by the contractor's representatives.			
	AQ	8	Air Quality		Carry out regular site inspections to monitor compliance with the Dust Management Plan, record inspection results and make the inspection log available to the local authority when asked.	This demonstrates to the local authority that the dust management plan is being complied with and appropriate control measures implemented. This also allows the contractor to understand where dust control measures are not being effective.	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Prepare method statements and implement through the contractor's PMP with regular site inspections.			
	AQ	9	Air Quality		Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry and windy conditions.	To ensure changes in met conditions do not result in dust nuisance.	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Prepare method statements and implement through the contractor's PMP with regular site inspections.			
	AQ	10	Air Quality		Plan the site layout so that machinery and dust causing activities are located away from receptors, as far as possible.	Site planning to prevent the potential of dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Develop site layouts, compounds, stores and haul routes while being cognisant of surrounding sensitive receptors during construction planning.			
	AQ	11	Air Quality		Keep site fencing, barriers and scaffolding clean using wet methods.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Prepare method statements for dust control and implement through the contractor's PMP with regular site inspections. When developing methodologies for using wet methods consider surface run-off impacts.			
	AQ	12	Air Quality		Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Planning of mass haulage of excavated and imported fill to minimise stockpiling which could be wind-whipped.			
	AQ	13	Air Quality		Cover, seed or fence stockpiles to prevent wind whipping	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Temporary storage of excavated materials to include measures to control dust as necessary. Taking into account weather, season and proximity of receptors.			
	AQ	14	Air Quality		All vehicles must switch off engines when stationary - no idling.	Good practice measure to help minimise the impact on local air quality	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Prepare method statements and implement through the contractor's PMP with drivers briefed to turn off engines when required.			
	AQ	15	Air Quality		Impose and signpost a maximum speed limit of 15mph on surfaced and 10mph on un-surfaced haul roads and work areas.	Good practice measure to help minimise the impact on local air quality and dust generation on unsealed roads	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Prepare method statements and implement through the contractor's PMP with drivers briefed as necessary.			
	AQ	16	Air Quality		Ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Prepare method statements and implement through the contractor's PMP with drivers briefed as necessary.			
	AQ	17	Air Quality		Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques, such as water sprays or local extraction.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Prepare method statements and implement through the contractor's PMP with operatives briefed as necessary.			
	AQ	18	Air Quality		Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement required to acknowledge the links between for dust suppression techniques and pollution spillage (surface run-off) on site and how this will be mitigated.			
	AQ	19	Air Quality		Ensure equipment is readily available on site to clean and dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement required for dust suppression and pollution spillage on site			
	AQ	20	Air Quality		Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Placed materials to include measures to control dust as necessary. Taking into account weather, season and proximity of receptors. Seeding to revegetate dusty materials to be completed as soon as feasible.			
	AQ	21	Air Quality		Only remove the cover in small areas during work and not all at once.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Soil stripping to be planned to avoid dust and silt generation where necessary to protect receptors			
	AQ	22	Air Quality		Ensure sand and other aggregates are stored in banded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement required for dust suppression and pollution spillage on site			
	AQ	23	Air Quality		Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in soils with suitable emission control systems to prevent escape of material and overfilling during delivery.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Avoidance	Method statement required for cement delivery, to avoid dust and spillage on site			

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	AQ	24	Air Quality		Use water-assisted dust sweepers on the access and local roads, to remove, as necessary, any material transferred out of the site.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement required for dust suppression and pollution spillage on site			
	AQ	25	Air Quality		Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement required for dust suppression techniques to be applied to on-site haul roads which are likely to be unsealed.			
	AQ	26	Air Quality		Record all inspections of haul routes and any subsequent action in a site log book.	Record keeping is beneficial should any issues arise	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Maintain records of site inspections and any action taken to resolve any issues.			
	AQ	27	Air Quality		Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinker systems, or mobile water bowlers and regularly cleaned.	Good practice measure which will help reduce potential dust issues	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement required for dust suppression techniques to be applied to on-site haul roads.			
	AQ	28	Air Quality		Implement a wheel washing system, with rumble grid at the exit of the site.	To prevent the transfer of material onto the local road network which has the potential to affect local air quality	Env Statement	13	.11				CEMP		Contractor's team	Construction	Mitigation	Method statement for use of the wheel wash system, operatives to be briefed.			
	Tr	1	All Travellers	Community and Private Assets	Removal of A40 through-traffic from the village of Llanddewi Velfrey and maintenance of footpaths and bridleways	To reduce community severance, particularly in the village of Llanddewi Velfrey	Env Statement	14			All Sheets	Masterplan	All sheets		Contractor's team	Construction	Enhancement	To allow NMUs to move around the village safely without undue risk from traffic			
	Tr	2	All Travellers	Community and Private Assets	Creation of circular routes for Non-Motorised Users based on footways, Public Rights of Way and minor local roads	To encourage active travel by local residents	Env Statement	14			All Sheets	Masterplan	All sheets		Contractor's team	Pre-construction	Enhancement	To make safe public footpath and bridleway connections across the new A40			
Amended Feb 2020	Tr	3	All Travellers	Nature Conservation	Provision of bridge parapets at Llanfallteg bridge to a height of 1.8 metres with a solid visual screening panel to the required height.	1. To provide a safe parapet for horse riders, a visual screen to protect against the horse's view of vehicles on the trunk road. 2. To provide a more guide for bats using the crossing	Other	8						Contractor's team	Construction	Mitigation	During bridge design and construction the 1.8m high parapet and visual screen are to be added and taken into consideration in the structural design of the bridge. Design for bat flightlines and connectivity should ensure that the parapet ties into boundary vegetation (hedges) at either end of the bridge.				
	CA	1	Archaeology & Cultural heritage		Site Watching brief	Recording chance finds in construction	Env Statement	10	.7						Contractor's team	Construction	Mitigation	Archaeological monitoring management plan			
	CA	2	Archaeology & Cultural heritage		Site 9 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	3	Archaeology & Cultural heritage		Site 19 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	4	Archaeology & Cultural heritage		Site 20 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	5	Archaeology & Cultural heritage		Site 36 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	6	Archaeology & Cultural heritage		Site 39 Watching brief and recording	Recording chance finds in construction	Env Statement	10	.7						Contractor's team	Construction	Mitigation	Archaeological monitoring management plan			
	CA	7	Archaeology & Cultural heritage		Site 44 Further assessment and recording of any features that will need to be demolished	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	8	Archaeology & Cultural heritage		Site 45 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	9	Archaeology & Cultural heritage		Site 46 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	10	Archaeology & Cultural heritage		Site 55 Further assessment and review of design options for this area	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	11	Archaeology & Cultural heritage		Site 56 Building recording	Recording features in accordance with approved appecification	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	12	Archaeology & Cultural heritage		Site 60 Further assessment	Determination of the state of the site and any further actions required	Env Statement	10	.7						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CA	13	Archaeology & Cultural heritage		Site 5 Tree planting to screen site	Improving the tree planting block to screen the chapel from the road	Env Statement	10	.7		All Sheets	Masterplan	ch.1620		Contractor's team	Construction	Mitigation	Landscaping and tree planting programme			
	CA	14	Archaeology & Cultural heritage		Carry out a Geophysical Survey of the extent of land taken for the scheme	Identification and characterisation of unknown archaeological features	Cadw	10	.7						Contractor's team	Pre-construction	Mitigation	Specialist subcontractor commissioned during Key Stage 3			
	CA	15	Archaeology & Cultural heritage		Archaeological evaluation may be required as indicated by results of the geophysical survey	Identification and characterisation of unknown archaeological features	Env Statement	10	.6						Contractor's team	Pre-construction	Mitigation	Archaeological monitoring management plan			
	CC	14	Climate Change		Adopt the PAS 2080 framework	To guide the approach to reducing GHG emissions	Env Statement	18	.7						Design team	Detailed Design	Mitigation	PAS 2080 to be followed by design and construction teams			
	CC	14	Climate Change		Minimise the extents of lighting	To reduce operational carbon emissions as well as O&M costs and ecological impacts	Env Statement	18	.7						Design team	Detailed Design	Mitigation	Only two roundabouts at either end of the scheme proposed to be lit. Lighting on approach to roundabouts have been reviewed and minimised.			
	CC	14	Climate Change		Highway alignment to provide earthworks balance	To reduce construction carbon emissions by using excavated material for embankments, landscaping and road build-up	Env Statement	18	.7						Design team	Detailed Design	Mitigation	Excavated material exported to landfill minimised as majority used onsite			
	CC	14	Climate Change		Minimise pavement thickness	To reduce need for carbon intensive pavement materials	Env Statement	18	.7						Design team	Detailed Design	Mitigation	Pavement design has considered traffic forecast data			
	CC	14	Climate Change		Consider alternative junction arrangement	Alternative junction arrangements made to reduce the carbon impact of stop-start conditions	Env Statement	18	.7						Design team	Detailed Design	Mitigation	Alternative junction arrangements considered however, not adopted in current design.			
	CC	14	Climate Change		Use local suppliers for materials and local workers where possible	Minimises journey distances to site and associated transport emissions	Env Statement	18	.7						Design team and contractor's team	Detailed design and construction	Mitigation	Local suppliers of resource and material used where practicable			
	CC	14	Climate Change		Explore strategies to reduce emissions within the local community	This type of initiative would offset the carbon impact of the project by reducing carbon emissions elsewhere in the community	Env Statement	18	.7						Design team and Welsh Government	Detailed Design	Mitigation	Strategies for community carbon reduction to be explored			

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	CC	14	Climate Change		Monitor and manage climate risks into the future	Due to the uncertainties involved in adapting to climate change, a pathways approach should be adopted which includes monitoring to determine if any thresholds for further action are reached	Env Statement	18	.7						Maintaining Agent	Detailed Design	Mitigation	Continue to monitor climate change risks			
	GC	7	Geology and Soils		Any discharge to the watercourse shall only be carried out with an appropriate environmental permit or consent from NRW or Local Flood Authority, where required, following monitoring, and if needed, treatment to ensure it is of acceptable quality.	Protect surface water quality	Env Statement	6	.10						Contractor's team	Construction	Enhancement	Appropriate permits are obtained. Water monitoring during construction confirms compliance. Evidence provided via monitoring reports.			
	GC	7	Geology and Soils		The reuse of site won or import of materials to the Scheme shall be managed by a verification system applied via the Specification for Highway Earthworks Series 600, and only materials found suitable for use will be acceptable for construction works.	Protect human health and controlled waters	Env Statement	6	.12						Contractor's team	Construction	Enhancement	Verification system implemented. Evidence provided in the Geotechnical Feedback Report.			
	GC	7	Geology and Soils		The environmental management of the construction activities shall be undertaken in line with best practice as outlined in the Construction Environmental Management Plan and as such would not have an impact on identified receptors. Construction mitigation measures outlined in Section 6.13 of the ES shall apply.	Protect human health and controlled waters	Env Statement	22	.2	T.3		Other	Chapter appendices including PreCEMP		Contractor's team	Construction	Enhancement	Appropriate method statements are produced.			
	GC	7	Geology and Soils		The available soil and groundwater chemical testing results shall be used to inform health and safety risk assessments for the construction and maintenance works.	Protect human health	Env Statement	6	.10	T.7		Other	Chapter appendices including PreCEMP		Contractor's team	All	Enhancement	Health and Safety file for the scheme contains soil/GW quality data. RAMS consider available information.			
	LV	1	Landscape & Visual	Nature Conservation	Translocation of existing Pembrokeshire hedgerbanks, or formation of new hedgerbanks on boundaries	Landscape integration and provision of habitat connectivity	Masterplan	9	.7		All Sheets	Env Statement			Contractor's team	Construction	Mitigation	Pre planning of hedge bank removal to allow translocation to permanent receptor site so that the hedge shrubs, flora and fauna of the bank can re-establish and provide fast regrowth			
	LV	2	Landscape Visual		Maintain the views from Maes y Rhos to the Preseli Hills whilst screening traffic on the new A40	Preserving the views.	Masterplan	9	.7		Ch 3250	Env Statement			Contractor's team	Pre-construction	Avoidance	Design of planting and earthworks to limit views of traffic, while not obscuring view to north			
	LV	3	Landscape Visual		Plant dense linear belt of trees and shrubs for screening from Pen-Blewyn Farmhouse	Visual screen of traffic on the A40	Masterplan	9	.7		Sheet 005	Env Statement			Contractor's team	Construction	Mitigation	A belt of dense tree and shrub planting			
	LV	5	Landscape Visual	Nature Conservation	Plant hedges and form Pembrokeshire hedge banks on north side of new A40 to provide a visual screen similar to the existing hedges on the old A40.	Provide mitigation for views of traffic from north, in particular from residential properties and footpaths to the north and to provide a headlight screen in locations identified during design.	Masterplan	9	.7		Ch.D-1000				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	6	Landscape Visual	Nature Conservation	Plant dense linear belt of trees and shrubs for screening of Tefarogor Farmhouse	Visual screening of traffic on new road.	Masterplan	9	.7		Ch.700 to 800				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	7	Landscape Visual	Nature Conservation	Plant dense linear belt of trees and shrubs for screening of Bronnau	Visual screening of traffic on new road.	Masterplan	9	.7		Ch.1150 - 1300				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	8	Landscape Visual	Nature Conservation	Tree and shrub planting on edge and within Ffynnon Wood on the north side of the new A40	Visual screening of embankment and traffic on new road for residential properties in Ffynnon.	Masterplan	9	.7		Ch. 1600 - 1700				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	9	Landscape Visual	Nature Conservation	Tree and shrub planting on edge of the new A40 at Hentlan Lodge on the south side	Visual screening of west bound traffic approaching dwelling	Masterplan	9	.7		Ch. 1240 - 1360				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	10	Landscape Visual	Nature Conservation	Scattered trees and shrubs, linear belts of trees and hedges as shown on the north side of the new A40 to the east of Ffynnon Wood	Landscape screening/filtering of views from the north, including Parc-delyn and Pentroydin Fach.	Masterplan	9	.7		Ch. 1900 - 2350				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	11	Landscape Visual	Nature Conservation	Linear belt of shrubs and small trees on the upper slopes of the south side of the cutting at Maes-y-fynnon and Maes-y-rhos	To provide low level screen of cutting, while allowing long northern views to the Preseli Hills.	Masterplan	9	.7		Ch. 2300 - 2400				Contractor's team	Construction	Mitigation	Tree and shrub planting to form a belt, but also to extend closer to road edge to form a narrowing of the tree canopy over the road for the benefit of bats.			
	LV	12	Landscape Visual	Nature Conservation	Low false cutting on the edge of the cutting on the south side at Maes-y-fynnon and Maes-y-rhos	In combination with provide low level screen of cutting, while allowing long northern views to the Preseli Hills.	Masterplan	9	.7		Ch. 2500 - 2700				Contractor's team	Construction	Mitigation	Minor earthworks to form a low false cutting around 1000mm high. With hedge style planting of shrubs. Fast growing tree and shrub planting to extend closer to road edge to form a narrowing of the tree canopy over the road for the benefit of bats.			
	LV	13	Landscape Visual		Hedgerow planting on back of verge on the south side of the embankment	To provide low level visual screen/filter for views from nearby public rights of way.	Masterplan	9	.7		Ch 2340 - 2720				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	14	Landscape Visual	Nature Conservation	Road in sufficiently deep cutting under the Llanfallteg Road Bridge with planting on the north slope to contain views of traffic from Pentroydin-fawr	Visual Screening at the two ends of the cutting and on the lower slopes to discourage barn owls from foraging over the road.	Masterplan	9	.7		Ch. 2720 - 2920				Contractor's team	Construction	Mitigation	Cutting with tree and shrub planting			
	LV	15	Landscape Visual	Nature Conservation	Dense woodland screen planting on north embankment slope	To provide screening/filtering of views of road and traffic from Pentroydin-fawr	Masterplan	9	.7		Ch.2920 - 3060				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	16	Landscape Visual	Nature Conservation	Dense woodland screen planting on north embankment slope and on adjacent small triangles of seamed land to north east	To provide screening/filtering of views of road and traffic from Tir Bach and to provide compensation habitat for dormouse	Masterplan	9	.7		Ch. 2380 - 3540				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	17	Landscape Visual	Nature Conservation	Scattered trees and shrubs and Hedgerows, dense tree and shrub planting on the north side of the new A40 and the proposed Bethel Chapel link road	Visual screening/filtering for views from Tir Bach and Bethel Cottage/The Vestry and Bethel Chapel.	Masterplan	9	.7		Ch. 3720 - 3970				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	18	Landscape Visual		Additional land taken at top of Bethel Cutting south slope to the end of the Llandewi Velfrey link road cutting to allow rounding off of the new slope to better integrate with the existing landform, so that the meeting of these two cut faces at ch. 3750 does not form a harsh elevated point	To better integrate the new landform with the setting	Masterplan	9	.7		Ch. 3570 - 3985, then south east to Glenfield Farm				Contractor's team	Construction	Mitigation	Tree and shrub planting			
	LV	19	Landscape Visual		False cutting/hedgerow at Bethel Chapel	To provide enhanced screening for the Chapel and adjacent properties and the cemetery	Masterplan	9	.7		Ch 3940 - 4130				Contractor's team	Construction	Mitigation	Minor earthworks to form a low false cutting around 1000mm high.			
	LV	20	Landscape Visual		Existing roadside hedge along the redundant A40 from the Bethel Roundabout to Croft House	To retain as much as possible to provide a low screen to views into the cutting from the proposed residential cul-de-sac for Croft House to Awella	Masterplan	9	.7		Llandewi Velfrey eastern link road				Contractor's team	Construction	Mitigation	Minor earthworks to form a low false cutting around 1000mm high.			

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	LV	21	Landscape Visual	Nature Conservation	All subsoil and soiled cutting and embankment slopes to be planted will be seeded with appropriate grasses, with wildflowers from an indigenous seed source.	To provide visual interest and nature conservation/biodiversity benefits	Masterplan	9	.7		All Sheets	Env Statement	???	Contractor's team	Construction	Mitigation	Seed to be collected by agreement, or purchased from a reputable supplier, with certified sources to ensure that wildflowers and any indigenous grass species (ie non cultivars) are from indigenous sources. Seed is to be spread on subsoil, or selected low-fertility topsoil. Subsequent management will require specific mowing regime.			
	LV	22	Landscape Visual		The setting of the existing Penblewin Rest Area will be enhanced with planting of scattered trees and shrubs on the north side of the existing A40.	To provide visual interest and nature conservation/biodiversity benefits	Masterplan	9	.7		Ch.300 to 370			Contractor's team	Construction	Enhancement	Scattered native tree planting on the land between the existing and proposed A40.			
	LV	23	Landscape Visual	Agriculture	The local road which is to be constructed to serve properties on the north side of the proposed road west of Ffynnon Wood is to be fenced with stockproof post and wire fence, while the new A40 will be enclosed by protected species fence.	To minimise the change to the landscape in the fields in views from the north.	Masterplan	9	.7		Ch.0 - 1230			Contractor's team	Construction	Mitigation	Stockproof post and wire fence is to be installed along the north side of this local road.			
	LV	24	Landscape Visual		Existing trees on the proposed enlarged roundabout at Penblewin are to be retained where these do not conflict with engineering requirements and a new planting scheme to be implemented	To provide landscape integration and visual amenity	Masterplan	9	.7		Ch. 0			Contractor's team	Construction	Combination	A design to be prepared during detailed design to take account of sightlines, utilities and maintenance requirements.			
	LV	25	Landscape Visual	Road drainage and Water Env	The proposed balancing ponds are to be planted in the manner indicated on the Environmental Masterplan	To provide landscape integration and nature conservation	Masterplan	9	.7		All Sheets	Env Statement		Contractor's team	Construction	Combination	A design to be prepared during detailed design to take account of nature conservation, visual screening and landscape integration requirements. Species selected for these areas will not include willow or alder, which are highly invasive species in damp ground, spreading by seed.			
	LV	26	Landscape Visual	Nature Conservation	Existing trees and hedges along the existing A40 are to be retained wherever possible unless removal is required for post construction access, achieving sightlines and accommodating other environmental measures.	To provide landscape integration, visual screening, nature conservation benefits, including habitat connectivity and for protection of the settings of cultural heritage sites.	Masterplan	9			All Sheets	Env Statement	Chapters 8, 9, 10	Contractor's team	Construction	Combination	The Existing Vegetation Design is to be prepared during Detailed Design to identify vegetation that is to be removed, retained or translocated to reflect the requirements of the ES and the Environmental Management Plan			
Amended Feb 2020	LV	27	Landscape Visual	Nature Conservation	The protection of existing trees within the Scheme construction boundary.	The locations of existing trees within the Scheme boundary are to be surveyed with sufficient accuracy to allow the designers at detailed design stage to determine which trees can be retained, which are to be felled and which trees would require special physical protection from construction activity to ensure that the aerial parts and the RPA's are not damaged nor the soils compacted.	Masterplan	9			All Sheets			Contractor's team	Construction	Avoidance	The Existing Vegetation Design is to be prepared during Detailed Design to identify vegetation that is to be removed, retained or translocated to reflect the requirements of the ES and the Environmental Management Plan			
	LV	27	Landscape Visual	All Travellers	Dismantling of the existing weighbridge and removal of the layby between Henllan Cottage and Ffynnon. Part of the layby will serve as a route for a public bridleway.	To allow the implementation of landscape seeding and planting.	Masterplan	9			Ch. 1320 - 1570			Contractor's team	Construction	Combination	The Existing Vegetation Design is to be prepared during Detailed Design to identify vegetation that is to be retained, areas to be soiled seeded and planted.			
	LV	28	Landscape Visual	Nature Conservation	The existing Ffynnon Wood road embankment will be widened to accommodate the wide and carriageway of the A40 and so areas of trees will be removed. The felling of trees is to be minimised. On completion of the new embankment the remaining woodland and the cleared areas are to be replanted/ restocked with suitable pioneer and permanent species of trees and shrubs.	To maintain the woodland cover in this area. Note that the woodland is used by Lesser and Greater Horseshoe Bats and other bat species. The loss of trees could sever flightlines. Replacement planting will be required to restate the canopy and to reduce the gap created by felling	Masterplan	9			Ch.1600 - 1950	Env Statement	Chapter 8	Contractor's team	Construction	Combination	The Existing Vegetation Design is to be prepared during Detailed Design to identify vegetation that is to be retained, areas to be soiled seeded and planted. Replacement planting will include locally indigenous species with some fast-growing native species to assist in reinstating bat crossings. At optimum points along the road through the wood, blocks of planting will be supplemented with short term planting of Salix Alba stakes up to 3 metres long and driven into the ground. These fast growing trees will provide a new canopy of branches over 4 metres tall within 2 years. Underplanting would include permanent tree species. The willows can be clear felled or selectively removed once underplanting has grown sufficiently.			
	LV	29	Landscape Visual	Nature Conservation	Creation of a wooded setting for the road, side roads and footpaths between Henllan and the proposed western Llanddewi Velfrey Access road junction	To maintain the woodland cover in Ffynnon Wood and extend the woodland to enclose the junction and reinforce the link with the Henllan avenue	Masterplan	9			Ch.1200 to 2100			Contractor's team	Construction	Combination	Planting of the various areas identified in the masterplan with a consistent range of species after construction is completed			
	LV	30	Landscape Visual		North facing slopes of the embankment and the enclosure of the balancing pond form a single large area of land which has to be integrating with the surrounding landscape through planting, to form hedgerows and woodland, and grassland management.	The landscape design provides a replacement pattern of new woodland and hedges to integrate the landform into the setting. Management of this area by grassland should be considered to reduce mowing costs and could include grazing if the road is separated by a fence.	Masterplan	9	.7		Ch. 2130 - 3450	Env Statement	Chapter 9	Contractor's team	All	Combination	Proposed layout shown in masterplan requires temporary fencing of trees and shrub planting including hedges. Note that the intention of these hedge plantings is to create the appearance of a large uncut hedge and so the conventional hedge planting can be replaced with more widely spaced planting in a 3 metres wide belt with a temporary fence (5 to 7 years) on both sides.			
	LV	31	Landscape Visual	Nature Conservation	Formation of a 'sunken lane' to carry a diverted public footpath (and also support bat connectivity objectives) the south side of a proposed pedestrian underpass. On the north side, to provide a terrace on the embankment that returns the footpath to the existing network.	Diversion of public right of way and provision of bat connectivity habitat to encourage bats to fly through the underpass, and to maintain the character of the sunken lane for the benefit of pedestrians.	Masterplan	9	.7		Ch.3300	Env Statement	Chapter 8	Contractor's team	Construction	Mitigation	Whilst the existing sunken lane is retained, the footpath will be diverted along a new route to the underpass. The 'sunken' lane is to be formed early in the programme by excavation in the centre and filling to form banks on both flanks of the path. Translocated hedges and coppice stools from areas of the site to be cleared can be used to plant the banks and achieve early enclosure as well as clear definition to bat flightlines to lead bats that fly along the sunken lane to the underpass.			
Amended Feb 2020	LV	32	Landscape Visual	Nature Conservation	Design of appropriate vegetation associated with underpasses and overhead crossings (hop-overs) for bats using appropriate species, and plant sizes and forms. This will include the planting of groups of advanced nursery stock trees with a minimum height of 4 metres when planted at bat hop-overs	To ensure that bats are guided to fly over vehicles on the road and thus avoid collision	NRW	9				Other	Proof of evidence of Peter Wells (WG 1.5.3) and Protected Species Conservation Plan prepared for NRW in response to their objection	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to the A40 LPI Programming Officer in response to the Mitigation Strategy provided to NRW on the 28th January 2020.			
	Mat	1	Materials		A Site Waste Management Plan (SWMP) and Materials Management Plan (MMP) will be produced	To minimise and manage waste created by the scheme	Env Statement	12					Paragraphs 16.5.6-15.5.8	Contractor's team	Pre-construction	Mitigation	Preparation and implementation of SWMP which will be managed by the Contractor.	In progress		
	Mat	2	Materials		Aim to reuse site won materials in earthworks. Limit disposal and movements by design to maximise the earthworks balance.	To minimise use of primary aggregates and minimise import of general fill.	Env Statement	12					Paragraph 16.14.2	Contractor's team	Pre-construction	Mitigation	Maximise earthwork balance through design.	In progress		
	Mat	3	Materials		Where removal from site is necessary, materials to be sorted, and where practical disposed of to recycling facilities rather than landfill.	To minimise material disposal to landfill and maximise reuse.	Env Statement	12					Paragrap 16.14.4	Contractor's team	Construction	Combination	This will be managed through the SWMP.	In progress		
	Mat	4	Materials		All materials shall be stored in a manner that minimises environmental pollution and wastage.	To minimise environmental pollution and wastage.	Env Statement							Contractor's team	Construction	Combination	This will be managed through the Materials Management Plan (MMP).			

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	Pulldown	Pulldown						Pulldown	Add as necessary	Description	Description	Pulldown	ES Chapter								Section of Text
	N	1	Nature Conservation	Landscape Visual	Low fertility soils to be used within soft estate where appropriate	To encourage the development of Species diversity and reduced aftercare costs	Env Statement	8				All Sheets	Masterplan	All sheets	Contractor's team	Construction	Enhancement	Avoidance of the use of topsoil for areas of grassland, unless there is a need for normal agricultural levels of fertility.			
	N	2	Nature Conservation	Landscape Visual	Where rock encountered in cuttings is adequate, consider retaining rock exposures allowing natural weathering and regeneration to occur	Provision of habitat and supporting species diversity	Masterplan	4				All sheets	Env Statement		Contractor's team	Construction	Enhancement	Identification of suitable locations during excavation works. Then during soiling works.			
	N	3	Nature Conservation	Nature Conservation	The species rich soil from grassland and hedgebanks that will be cleared is to be translocated to areas to be identified during detailed design and managed appropriately	To provide visual interest and nature conservation/biodiversity benefits	Other					All Sheets			Contractor's team	Construction	Combination	Early identification of donor and receptor sites and careful soil handling with limited periods of soil storage.			
	N	4	Nature Conservation		Protected Species fencing (otter and badger) is to be installed along the full length of the A40 scheme. The fence will not include a cranked top.	To provide a barrier to species crossing the road and to guide them to suitable crossings under the road.	Env Statement					All Sheets	Masterplan		Contractor's team	Construction	Mitigation	Protected species fence (badger and otter) is to be installed along the			
	N	5	Nature Conservation	Nature Conservation	Provision of bat boxes	to provide replacement roosting opportunities for bats using Trefangor Cottage	Env Statement	8	.7						Contractor's team	Construction	Combination	bat boxes to be erected on suitable trees prior to demolition of Trefangor Cottage			
	N	6	Nature Conservation	Road drainage and Water Env	Standard best practice pollution prevention and control measures must be adhered to at all times during construction including CRIA CS32: Control of Water Pollution from Construction Sites, CRIA Environmental Good Practice on Site.	To ensure no pollution effects during construction on statutory (SAC, SSSI)	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Detailed in the CEMP				
	N	7	Nature Conservation	Road drainage and Water Env	Surface water monitoring to be undertaken to demonstrate no adverse effects on water quality during construction works	To ensure no pollution effects from construction activities	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Detailed in the CEMP				
	N	8	Nature Conservation	Road drainage and Water Env	Any pollution or spills to be reported immediately to the Contractor's Site Environmental Manager	To ensure no pollution effects from construction activities	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Detailed in the CEMP				
	N	9	Nature Conservation		Existing trees, woodlands and hedgerows to be retained, must be protected during construction with protective fencing where necessary in accordance with BS5837:2012.	To ensure protection of retained areas	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Detailed in the CEMP				
	N	10	Nature Conservation		Pre-construction survey of all areas within construction footprint to identify the location of any invasive species	To prevent the spread of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Invasive species management plan to be produced as part of CEMP				
	N	11	Nature Conservation		A Method Statement for preventing the spread of any invasive species to be produced at Detailed Design stage and included within the CEMP.	To prevent the spread of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Invasive species management plan to be produced as part of CEMP				
	N	12	Nature Conservation		Pre-construction surveys must be carried out to verify the location, status and characterisation of previously identified bat roosts and to identify any new bat roosts within the construction footprint and a 50metre radius	ensure compliance with protected species legislation	Env Statement	8	.2					Contractor's team	Construction	Mitigation	Detailed in the CEMP				
	N	13	Nature Conservation		Obtain relevant Protected species licences (dormouse, badger and bat) from Natural Resources Wales	ensure compliance with protected species legislation	Env Statement	8	.7					Contractor's team	Construction	Mitigation	Method statements included within the ES.				
	N	14	Nature Conservation		Night working should be avoided where possible. If it cannot be avoided, it should be restricted in the vicinity of known bat commuting routes and valuable areas of foraging habitat.	To minimise construction stage impacts on bats, otter and dormice	Env Statement	8	.7					Contractor's team	Construction	Mitigation	information to be provided in the CEMP				
	N	15	Nature Conservation		No steep-sided, deep and/or water-filled excavations would be left uncovered overnight or without means of escape.	to minimise effects on terrestrial mammals	Env Statement	8	.7					Contractor's team	Construction	Mitigation	through adherence to measures in the CEMP				
	N	16	Nature Conservation		Site clearance activities should be timed to avoid the bird breeding season (March to August inclusive), where possible.	to minimise construction stage impacts breeding birds	Env Statement	8	.7					Contractor's team	Construction	Avoidance	through adherence to measures in the CEMP				
	N	17	Nature Conservation		Ecologist to carry out a nesting bird check on any vegetation to be cleared, or vegetation directly adjacent to major works, no more than 48 hours prior to works commencing.	to minimise construction stage impacts breeding birds	Env Statement	8	.7					Contractor's team	Construction	Mitigation	through adherence to measures in the CEMP				
	N	18	Nature Conservation		A detailed method statement for the potential translocation of the hedgerows will be drawn up at the detailed design stage.	to minimise the loss of hedgerow habitat	Env Statement	9	.7					Contractor's team	Construction	Mitigation	through adherence to measures in the CEMP				
	N	19	Nature Conservation		The reptile mitigation will be determined at detailed design stage. Habitat manipulation and creation strategies will be prioritised over exclusion fencing and translocation strategies.	to minimise the impacts on reptile species	Env Statement	8	.7					Contractor's team	Construction	Mitigation	through adherence to measures in the CEMP				
	N	20	Nature Conservation		Method statements will be drawn up at the detailed design stage comprising a series of mitigation measures including timing of works, to prevent adverse impacts on Section 7 species.	to minimise the construction stage impacts on such species and biodiversity in general	Env Statement	8	.7					Contractor's team	Construction	Mitigation	through adherence to measures in the CEMP				
	N	21	Nature Conservation		Water course culverts to be oversized at 1.8m diameter or greater. Note that this has been superseded with a requirement for larger sizes of oversized culverts as set out in the Protected Species Conservation Plan.	to provide safe crossing points for bats	Env Statement	8	.7				Masterplan		Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to the A40 LP Programming Officer in response to the Mitigation Strategy provided to NRW on the 28th January 2020.			
	N	22	Nature Conservation	Landscape Visual	Pedestrian and multi-user underpasses to be unlit	to provide safe crossing points for bats	Env Statement	8	.7				Masterplan		Contractor's team	Construction	Mitigation	through detailed design			
	N	23	Nature Conservation		provision of mammal underpasses alongside watercourse culverts and at Chainage 3+350	to provide safe crossing points for badgers and otters and to minimise visual intrusion of lighting at night	Env Statement	8	.7				Masterplan		Contractor's team	Construction	Mitigation	through detailed design			
	N	24	Nature Conservation		provision of dormouse underpasses as shown on the EMPS	to provide safe crossing points for dormice	Env Statement	8	.7				Masterplan		Contractor's team	Construction	Mitigation	through detailed design			
Amended Feb 2020	N	25	Nature Conservation	Landscape Visual	Use of species rich grassland seed mixtures on all areas to be seeded to grass	to increase the area of species rich grassland	Env Statement	8	.7				Masterplan		Contractor's team	Construction	Enhancement	through landscape specification. Note that this is particular requirement to contribute to the Welsh Government Green Corridors Initiative and to provide enhancements in accordance with the Environment (Wales) Act 2016 Part 1 Section 6 to maintain and enhance biodiversity.			
	N	26	Nature Conservation		Provision of an artificial badger sett in accordance with the confidential reports and relevant licences	to provide a replacement sett for badgers	Env Statement	8	.7				PS Licence		Contractor's team	Construction	Combination	through adherence to the badger licence.			

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	Pulldown	Pulldown						Pulldown	Add as necessary	Description	Description	Pulldown	ES Chapter							
Added Feb 2020	N	27	Nature Conservation	Landscape Visual	No development, including site clearance, shall commence until site wide Dormouse and Bat Conservation Strategies have been submitted to and approved in writing. The Conservation Plans shall build upon the principles outlined in 'A40 Llanddewi Velfry to Penllewin Improvements: Protected Species Conservation Strategy', reference no A40LVP-ARP-EBD-SWI-RP-LE-0008 and in the ES.	To set out and implement proposals for Conservation of Bats and Dormouse	NRW	8					Other	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	28	Nature Conservation	Landscape Visual	No works on site shall commence until the drawings setting out the arrangement and design of fencing at each location where it is intended to provide safe passage by other under the road has been submitted to and approved in writing. The drawings shall be implemented as agreed.	To set out and implement proposals for Conservation of otter	NRW	8	.7				NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	29	Nature Conservation	Landscape Visual	No works on site shall commence until a Landscape Ecological Management Plan (LEMP) for the provision, management and maintenance of the landscaping and ecological features at the site has been submitted and approved in writing.	long term management of habitats providing mitigation for impacts on protected species and monitoring proposals	NRW	22	.8	T.1			NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Combination	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	30	Nature Conservation	Landscape Visual	Prior to its installation, full details of lighting shall be submitted to and agreed in writing.	To agree the nature and construction of lighting to minimise adverse impacts on protected species	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Avoidance	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	31	Nature Conservation	Road drainage and Water Env	Crossing A1: at ch0+290 culvert to be widened to 1.8m height and 3m wide rectangular culvert section	Watercourse culvert enlarged to maximise benefit to bats in accordance with Protected Species Conservation Plan	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	32	Nature Conservation	Landscape Visual	Crossing A at ch0+500to be a hop-over Retained mature trees between existing A40 and Scheme. Inclusion of mature planting to north of the Scheme. Use of minimum 4m high planting on either side of Scheme.	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	33	Nature Conservation	Landscape Visual	Crossing B at ch1+020 to be a hop over. Retain mature trees on south side of existing A40. Inclusion of mature planting to north of the Scheme. Use of minimum 4m high planting on either side of Scheme	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	34	Nature Conservation	Landscape Visual	Crossing C at ch1+200 to be a hop over Retain mature trees on south side of existing A40. Inclusion of mature planting to north of the Scheme. Use of minimum 4m high planting on either side of Scheme. The existing road is currently very wide (over 20m) at this location and the proposal to plant the existing verge of the Scheme will ensure that the gap between the vegetation on either side of the Scheme is no wider than currently	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	35	Nature Conservation	Landscape Visual	Crossing C2 at ch1+400 to be a hop over Use of minimum 4m high planting on either side of Scheme	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	36	All Travellers	Nature Conservation	Crossing D at Ch 1690 (ch1+510 to 1+820) to be a 27m long 3.4m high shared use (NMU) bridleway underpass (unit and suitable to be used bats and other mammals). Inclusion of planting to guide bats towards the underpass on both sides. Underpass size acceptable for bats – planting will be adjusted to guide bats to the culvert. Inverts to have that allow natural drainage of the culvert and to be level with the PMA and proposed WCHR route at either end.	To be used by walkers, mounted horse riders, cyclists and also to serve as an unit crossing for bats, badgers, otter and other mammal species in accordance with Protected Species Conservation Plan	Env Statement	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Enhancement	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	37	Nature Conservation	Landscape Visual	Crossing E at ch2+210 to be a hop over Inclusion of planting on either side of the Scheme. Use of minimum 4m high planting on either side of Scheme	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	37	Nature Conservation	Landscape Visual	Crossing F at ch2+320 to be a hop over Inclusion of planting on either side of the Scheme. Use of minimum 4m high planting on either side of Scheme	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 NRW tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	38	Nature Conservation	All Travellers	Crossing G at ch2+630 to be a shared Public Footway and Farm Underpass (Pen-troydin-fach and Pen-troydin-fawr). To be unit and suitable to be used bats and other mammals. This underpass includes a watercourse culvert. Approximately 50m in length by 3.2m x 3.2m with inverts of footway at natural ground levels that will allow natural drainage of the culvert. Note that planting leads to entrances of underpass, but no tree planting is required above the headwall.	To be used by walkers, mounted horse riders, cyclists and also to serve as an unit crossing for bats in accordance with Protected Species Conservation Plan	Env Statement	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		
Added Feb 2020	N	39	Nature Conservation	All Travellers	Crossing H at ch2+850 to use the Llarnfallteg Bridge Parapets of the bridge will be 1.8m high with at least the lower 1m of solid material to prevent glare from headlights of vehicles passing on trunk road below.	To provide a safe crossing for horse riders, walkers and cyclists while also supporting use as a bat lightline that must link with existing retained hedges at the north and south ends of the bridge deck.	Local Resident	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PlI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.		

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	Pulldown	Pulldown						Pulldown	Add as necessary	Description	Description	Pulldown	ES Chapter								Section of text	Table in Chapter
Added Feb 2020	N	40	Nature Conservation	Landscape Visual	Crossing I at ch3+100 to be an underpass designed for the crossing of bats and dormouse, principally. Approximately 53m in length. Minimum 3m x 3m box culvert, with invert at natural ground level on the south side and allowing natural drainage of the culvert	To serve as an unlit crossing for bats and dormouse but also other mammal species in accordance with Protected Species Conservation Plan.	NRW	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PLI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.				
Added Feb 2020	N	41	Nature Conservation		Crossing J at ch3+100 to be a minimum 3m x 3m box culvert approximately 109m in length, with inverts of footway high in the embankment profile but allowing natural drainage of the culvert. Note that a separate watercourse culvert will be located below with inverts to suit drainage design. Note that planting leads to entrances of underpass, but no tree planting is required above the headwall.	To provide headroom for agricultural vehicles and a safe crossing for walkers while also supporting use as a bat flightline that must link with existing retained hedges at the north and south ends.	NRW	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PLI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.				
Added Feb 2020	N	42	Nature Conservation		Crossing K2 at ch3+270 to be a 54 m long 3.2m x 3.2m box culvert underpass principally designed for bats with inverts of footway meeting natural ground level to the south and the embankment slope to the north that will allow natural drainage of the culvert. Note that planting leads to entrances of underpass, but no tree planting is required above the headwall.	To serve as an unlit crossing for bats and other mammal species in accordance with Protected Species Conservation Plan.	NRW	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PLI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.				
Added Feb 2020	N	43	Nature Conservation	Landscape Visual	Crossing L at ch3+460 to be a hop over	Inclusion of planting on either side of the Scheme	To narrow down the width of road crossing and to provide advanced nursery stock trees of a size that has a canopy taller than high sided vehicles.	NRW	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PLI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.			
Added Feb 2020	N	44	Nature Conservation	Landscape Visual	The dormouse habitat loss and gain drawings 1 to 6 provided within the Protected Species Conservation Plan show the extent of advanced tree planting that is to be carried out during the first available planting season using new nursery stock or translocated hedges or coppice stools. These areas and their environmental functions are defined on the Environmental Masterplans.	To provide early habitat and species connectivity, landscape integration and visual screening as required	NRW	8					NRW	See REAC Appendix 1 tab	Contractor's team	Construction	Mitigation	To meet the requirements of Natural Resources for Wales as set out in their letter dated 11th February 2020 to The A40 PLI Programme Officer in response to the Protected Species Conservation Plan provided to NRW on the 28th January 2020.				
	NV	1	Noise and Vibration		Location of noisy equipment at furthest practicable distance from properties and provide temporary screening where possible.	Reduce construction noise impacts at properties.	Env Statement	14							Contractor's team	Construction	Mitigation	Contractor to identify optimum positions for noisy equipment and screening to minimize disruption. Commitment to be written into CEMP.				
	NV	2	Noise and Vibration		Vibratory rollers not to be used within 90m of properties during operation (125m for start up/run down) unless further risk assessment and monitoring can demonstrate no likely adverse effect due to vibration.	Reduce construction vibration impacts at properties.	Env Statement	14							Contractor's team	Construction	Mitigation	Contractor to undertake further risk assessment prior to works and/or vibration monitoring at the start of works within the stipulated distances to confirm no adverse effects due to vibration. Commitment to be written into CEMP.				
	NV	3	Noise and Vibration		Best practicable means to control noise and vibration	Reduce construction noise and vibration impacts	Env Statement	14							Contractor's team	Construction	Mitigation	Best practicable means measures to be written into the CEMP.				
	NV	4	Noise and Vibration		Low noise road surfacing	Reduce operational noise impacts by at least 3dB compared with a typical 1.5mm texture depth HRA surface (where speeds are over 75mph)	Env Statement	14							Contractor's team	Construction	Mitigation	A HAPAS approved thin surface course system with a Road Surface Influence (RSI) < 5dB.				
	W	29	Road drainage and Water Env		A surface water management system, using measures such as temporary silt fencing, cut-off ditches, settlement basins and bunds will be set up as early in the construction period as possible to capture all runoff within or traversing the construction corridor. The road drainage will be installed early in the construction period and used for site drainage	Protect surface water quality	Env Statement	7	.11	T.13			Other	CEMP	Contractor's team	Construction	Mitigation	Method statement required for dust suppression and pollution spillage on site				
	W	29	Road drainage and Water Env	Geology and Soils	Water with a higher risk of contamination, including groundwater pumped out of excavations during concrete pouring, will be contained and treated using appropriate measures such as coagulation of sediments, dewatering and pH neutralisation prior to discharge	Protect the environment from the results of water contamination	Env Statement	7	.10						Contractor's team	Construction	Mitigation	Method statement required for dust suppression and pollution spillage on site				
	W	29	Road drainage and Water Env	Geology and Soils	Areas of exposed sediment deemed at risk of erosion during heavy rainfall or flood inundation should be protected using either temporary measures (e.g. sheeting) or semi-permanent measures (e.g. coir matting) until vegetation is able to establish on these surfaces	Prevent soil runoff, protect integrity of geomorphology	Env Statement	7	.10						Contractor's team	Construction	Mitigation	Method statement required for dust suppression and pollution spillage on site				
Feb-20	A	3	Agriculture		Measures to provide access including Private Means of Access to farms and field gates are set out in the ES and provision of replacement field drainage and water supplies as agreed with landowners.	To mitigate for the effects of the Scheme on farm businesses	Env Statement	12	.6	T.7					Contractor's team	Construction	Mitigation	Development of a plan of mitigation during detailed design that demonstrates realistic mitigation for agreement with landowners and tenants.				
Added Feb 2020	G	1	General		Works required to provide a suitable area for access for Miss Sandra Rowlands into land north of Bethel Chapel (entrance proposed directly opposite new length of Bethel Lane.	To mitigate for the effects of the Scheme on land holding	Landowner						Other	R0019 Letter Paragraph 4.4	Contractor's team	Construction	Mitigation	Design of suitable access arrangement to be developed at detailed design / construction				
Added Feb 2020	G	2	General		Works required to ensure that land drains over land owned by Mr & Mrs Reynolds (Pen-Troydin Fawr) are tied into the highway cut-off ditches and adequately drained.	To ensure continued adequate drainage of the field after the Scheme is constructed.	Landowner						Other	R0023 Letter Paragraph 3.2	Contractor's team	Construction	Mitigation	Existing field drainage to be tied into the highway cut-off ditches				
Added Feb 2020	G	3	General		Topographical survey and condition assessment to be undertaken of lane owned by Mr & Mrs Reynolds (Pen-Troydin Fawr) to allow assessment of suitable design of track surfacing / other works to allow Welsh Government's maintaining agents to access Attenuation Pond D for maintenance purposes.	To provide suitable improvements to the track if necessary to allow Welsh Government's maintaining agents to access Attenuation Pond D for maintenance purposes.	Landowner						Other	R0023 Response letter dated 06 March 2020	Contractor's team	Construction	Mitigation	Suitable design to be proposed to the benefit of both parties to allow access to the Attenuation Pond				
Added Feb 2020	G	4	General		Undertake further engagement with Pembrokeshire County Council (PCC) over speed restrictions along the A478 on the southbound approach towards Penblewin roundabout.	To ensure continued safe operation of the A478	Landowner						Other	R0024 Letter paragraph 8.5	Contractor's team	Construction	Mitigation	Speed limit restrictions to be provided on the southbound approach to Penblewin roundabout				



REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS

Date of addition or revision	Ref/Number		Subject	Secondary subjects	Description of Environmental Action or Commitment	Objective (desired outcome)	Main source of action or commitment	Recorded where? ES text, table or Masterplan Sheet						Responsibility for completion	When?	Commitment to mitigate or enhance?	How is outcome to be achieved?	Action completed /Commitment fulfilled?	Notes on completion	Evidence of completion	
	Pulldown	Pulldown						Pulldown	Add as necessary	Description	Description	Pulldown	ES Chapter								Section of text
Added Feb 2020	G	5	General		Discuss and agree suitable accommodation works fencing with Mr & Mrs Peett of Caermaenau Fawr Farm	To ensure safe segregation of livestock and other animals from the construction works	Landowner						Other	R0024 Letter paragraph 9.1	Contractor's team	Construction	Mitigation	Develop and agree accommodation works detail in vicinity of Caermaenau-Fawr			
Added Feb 2020	G	6	General		Ensure water supply for Valley View is provided, and that the design takes into account access over third party land.	To provide continued water supply to the property	Landowner						Other	R0028 Letter paragraph 2.2	Contractor's team	Construction	Mitigation	Ensure water supply is provided			
Added Feb 2020	G	7	General		Ensure broadband for Valley View is provided, and that the design takes into account access over third party land.	To provide continued broadband supply to the property	Landowner						Other	R0028 Letter paragraph 3.2	Contractor's team	Construction	Mitigation	Ensure broadband supply is provided			
Added Feb 2020	G	8	General		Improvements at the entrance of Blaen-PenTroydin Lane	Undertake improvements to Blaen-PenTroydin Lane entrance should the planning permission already granted still be valid	Landowner						Other	R0036 Letter paragraph 1.7	Contractor's team	Construction	Mitigation	Undertake improvement works to the entrance, in line with the planning permission granted, should the Scheme's Statutory process proceed along the currently published programme			
Added Feb 2020	G	9	General		The provision of passing places along Blaen-PenTroydin Lane	Provide passing places at Blaen-PenTroydin Lane for traffic to pass	Landowner						Other	R0036 Letter paragraph 5.4	Contractor's team	Construction	Mitigation	Provision of passing places			
Added Feb 2020	G	10	General		Works to be undertaken to Ffynnon Lane to clear existing muck / vegetation from the southern edge of the lane to widen the lane.	Widen the lane to provide passing opportunities along the lane	Landowner						Other	R0025, R0034, R0025 Response letters	Contractor's team	Construction		Clear existing muck & dirt to provide more of the original width of the road (which is underneath the dirt).			
Added Feb 2020	G	11	General		Suitable surfacing to be designed for Bethel Lane to take into account the proposed gradient in icy conditions	Suitable pavement surfacing to be provided	Landowner						Other	R0027 Letter paragraph 2.1	Contractor's team	Construction	Mitigation	Suitable surfacing to be provided			
Added Feb 2020	G	12	General		Suitable car parking arrangements to be designed for Bethel Chapel.	Safe and suitable car parking provision to be provided	Landowner						Other	R0027 Letter paragraph 3.1	Contractor's team	Construction	Mitigation	Suitable parkin provision to be provided			
Added Feb 2020	G	13	General		Ensure water supply for Talfan & Vera Evans is provided.	To provide continued water supply to the property	Landowner						Other	R0033 Letter paragraph 4.2	Contractor's team	Construction	Mitigation	Ensure water supply is provided			
Added Feb 2020	G	14	General		Undertake precondition survey on stone wall outside Penrhif Cottage and undertake remedial action if necessary.	Ensure structural integrity is not compromised	Landowner						Other	R0034 Letter paragraph 5.2	Contractor's team	Construction	Mitigation	Ensure any damage tp the wall is fixed			
Added Feb 2020	G	15	General		Provide some form of shielding for the property of Penlain from vehicle headlights which would at times shine onto the living room window	Shielding of lights from entering the property ground floor windows	Landowner						Other	R0035 Letter paragraph 4.1	Contractor's team	Construction	Mitigation	Fence / blackout blinds etc.			
Added Feb 2020	LV		Landscape Visual		Contractor shall employ a professional arborist to advise on the protection of trees and root protection areas and the need for tree surgery before construction	Protection of trees	Env Statement						Other		Contractor's team	Construction	Mitigation	Surveys, Method Statements and Tree Protection drawings			