UWF Grid Connection

Environmental Management Plan (2019)

Tab 9

Best Practice Measures



Best Practice Measures

EMP

October 2019

BPM No.	Best Practice Measures
GC-BPM-01	Best Practice Measures for Protection of Surface Water Quality and Watercourse Morphology during instream works at Mountphilips Substation site
GC-BPM-02	Best Practice Measures for Protection of Surface Water Quality and Watercourse Morphology during replacement of existing culverts along the 110kV UGC outside Mountphilips Substation site
GC-BPM-03	Best Practice Design of New Permanent Watercourse Crossing Structures and Existing Culvert Replacements to Prevent Flood Risk
GC-BPM-04	Best Practice Surface Water Quality Protection Measures for Site Runoff during the Mountphilips Substation Site Construction Works
GC-BPM-05	Best Practice Measures to Protect Surface Water and Groundwater Quality during use of Cement Based Compounds
GC-BPM-06	Best Practice Measures to Protect Surface Water and Groundwater Quality During Storage and Handling of Fuels, Oils and Chemicals
GC-BPM-07	Best Practice Measures to Protect Surface Water Quality During Storage of Overburden at the Mountphilips Substation Site
GC-BPM-08	Best Practice Measures for Minimising Dust Emissions from Site Activities
GC-BPM-09	Local Employment and Local Sourcing
GC-BPM-10	Measuring Operational EMF Emissions
GC-BPM-11	Measuring Operational Electricity Production

Table 1: List of Best Practice Measures for the UWF Grid Connection

	Best Practice Measure GC-BPM-1				
Tit	le:	Best Practice Measures for Protection of Surface Water Quality and Watercourse Morphology during instream works at Mountphilips Substation site			
Re	levant Wat	tercours	e Crossing Points		
W1	L, W2, W3	at Moun	tphilips Substation site		
Re	sponsibilit	y of	Role/Duty		
Co Ma	Construction Manager		Monitor weather conditions and supervise instream works. Ensure instream works are carried out in accordance with project design measures and best practice measures.		
Su	rface Wate	er Quality	y Protection Measures		
Tin	ning				
•	Instream within the	vorks at IFI instre	W1, W2 and W3, at the Mountphilips Substation site will be undertaken during dry weather eam works window (July – September inclusive).		
Su	pervision 8	Monito	ring Measures		
•	The instre CIEEM and are follow	am work I the Inst ed.	is at W1, W2 and W3, at the Mountphilips Substation site will be supervised by a member of itute of Fisheries Management to ensure both the Project Design Measures and Best Practice		
•	All constru of the Env Environme	iction wo vironmer ental Cor	orks will be monitored on a daily basis by the Environmental Clerk of Works and by members ntal Clerk of Works team (for example Site Ecologist) as required, for compliance with the nmitments		
•	 Surface water quality monitoring of the main watercourses downstream of the works will be carried out to ensure that the downstream water quality status in the receiving water is maintained. The surface water monitoring locations and sampling programme are defined in the Surface Water Management Plan for UWF Grid Connection 				
Ge	neral Meas	sures to l	be implemented for instream works at W1, W2, W3		
•	Double silt	t fencing	will be placed along each side of the watercourse;		
•	Machinery 10m buffe	v will onl ^ı r will be	y work from access roads, and the operation of machinery and use of equipment within the kept to a minimum to avoid any unnecessary disturbance;		
•	Double sil surfaces fr	t fencing om ente	and berms will be placed at the crossing to prevent sediment/runoff from the access road ring the watercourse;		
•	Disturband impact on	ce of bar the wate	nkside soils and watercourse sediments will be kept to the minimum to avoid unnecessary ercourse morphology;		
•	Clay bunds will be placed within any adjacent upslope cables trench on both sides of the watercourses to preven the trench acting as a drain towards the watercourse;				
•	Watercourse crossing W1 involves the installation of underground cabling (under the bed of the watercourse) and the installation of a temporary Bailey bridge crossing structure. The flume/pipe watercourse crossing method will be used at W1; A pipe/flume with sufficient capacity/size to accommodate the flow rate of the stream, will be placed on the watercourse bed without disturbance to the bed;				
•	Watercour local elect structures	rse cross ricity sup . The dar	ings W2 and W3 involve the installation of underground cabling for the 110kV UGC and the oply to the substation compound, in addition to the construction of new permanent crossing nming and over-pumping method will be used at W2 and W3 at Mountphilips Substation Site;		
•	Dams will the water streambed	be instal flow th l;	lled at both the upstream and downstream ends of the pipe/flume/pump in order to direct prough the pipe/flume/pump hose, therefore allowing work to be carried out on a dry		
•	Dams will be made of sand (clean) bags, cobbles or clean well-graded coarse gravel fill. Poorly sorted material will not be used as it would be a potential source of fine sediment;				

- A temporary sump will be constructed in the watercourse bed at the proposed dam location if a natural pool does not already exist. The sump will be lined with clean rockfill to prevent scouring and erosion during pumping at the intake;
- An energy dissipater (such as clean rock fill or splash plates) will be placed on the watercourse bed downstream of the pipe/flume/pump outfall. This will prevent scouring and erosion of the watercourse bed at the outfall;
- Once the watercourse flow is isolated from the excavation area, excavation works can commence to install the cable ducting and install the crossing structures;
- Under the supervision of an aquatic ecologist, any spawning gravels will be removed at the culvert location and will be temporarily stored in bags at a point greater than 10m from the watercourse;
- Once the lean mix concrete is in place in the trench, a layer of fine sand (5 10cm) will be laid over the concrete prior to final backfilling. This will prevent release of cement into the watercourse when flow is restored;
- Only precast concrete culverts or structures will be used at W2 and W3. No batching of wet cement will take place on-site. (Project Design Measure); A steel Bailey bridge will be temporarily installed at W1.

Measures to reinstate the watercourses at crossing points W1, W2 and W3 at Mountphilips Substation site

At Mountphilips Substation site, instream construction works at the watercourse crossing W1, W2 and W3 will be followed by site-specific reinstatement measures to ensure the equilibrated restoration of flow character and morphology within the affected reach to achieve baseline character and avoid any deterioration in morphology as required under the Water Framework Directive (WFD). Measures will include:

- bank stabilisation using boulder armour or willow/brush bank protection;
- reinstatement of bank slope and character, creation of compound channels where necessary;
- reinstatement of instream flow features such as boulder substrates, pool / riffle sequences, or spawning cobbles;
- planting along the riparian margins to stabilise banks, add flood protection and provide riparian buffer; and
- the use of deflector plates during the restoration of flow.

References

IFI (2016) Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters. NRA (2008) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes.

			Best Practice Measure GC-BPM-2	
Tit	le: Best Practice Measures for Protection of Surface Water Quality and Watercourse Morphology during replacement of existing culverts along the 110kV UGC outside Mountphilips Substation site			
W: of	13, W14, W the 110kV (15, W17 JGC.	, W19, W20, W32, W34, W55, W57, W60, W61 and W64 along the public road on the route	
Re	sponsibility	/ of	Role/Duty	
Co Ma	Construction Manager		Monitor weather conditions and supervise instream works. Ensure instream works are carried out in accordance with project design measures and best practice measures.	
Su	rface Wate	r Quality	Protection Measures	
Tir	ning			
•	 Culvert replacement works at W14 along the R503 Regional Road will only be undertaken during the IFI specified period (July, August and September). Culvert replacement works on the section of 110kV UGC between W13 and W20 (inclusive) and the culvert replacement works at W32 and W34 will only be completed during dry weather in the dryer months of the year 			
	– I.e. Febru	iary to Se	eptember included	
Su	pervision &	Monitor	ing Measures	
•	Culvert rep CIEEM and are followe	blacemer the Insti ed.	nt works at the 13 existing culverts on the public road, will be supervised by a member of itute of Fisheries Management to ensure both the Project Design Measures and Best Practice	
•	All construction works will be monitored on a daily basis by the Environmental Clerk of Works and by members of the Environmental Clerk of Works team (for example Site Ecologist) as required, for compliance with the Environmental Commitments			
•	Surface water quality monitoring of the main watercourses downstream of the works will be carried out to ensure that the downstream water quality status in the receiving water is maintained. The surface water monitoring locations and sampling programme are defined in the Surface Water Management Plan for UWF Grid Connection			
Ge	neral Meas	ures to b	e implemented for culvert replacement works	
•	Sand (clear Machinery 10m of the	n) bags w will only waterco	vill be placed along the road pavement edges on each side of the watercourse; work from the public road, and the operation of machinery and use of equipment within the purse will be kept to a minimum;	
•	Sand (clean) bags will be placed at the crossing to prevent sediment/runoff from the public road surfaces from entering the watercourse;			
•	Bunds will be placed within any adjacent upslope cables trench on both sides of the watercourses to prevent the trench acting as a drain towards the watercourse;			
•	Culvert rep structure in	blacemer n its plac	nt works will involve the removal of the existing culvert and the installation of a new crossing e. The damming and over-pumping method will be used during works.	
•	Dams will I through th	oe install e pump	ed at both the upstream and downstream ends of the pump in order to direct the water flow hose, therefore allowing work to be carried out on a dry streambed;	
•	Dams will I	pe made	of sand (clean) bags, cobbles or clean well-graded coarse gravel fill;	
•	A tempora does not a at the intal	ry sump lready ex ke;	will be constructed in the watercourse bed at the proposed dam location if a natural pool ist. The sump will be lined with clean rockfill to prevent scouring and erosion during pumping	
•	An energy dissipater (such as clean rock fill or splash plates) will be placed on the watercourse bed downstream of the pump outfall. This will prevent scouring and erosion of the watercourse bed at the outfall;			

- Once the watercourse flow is isolated from the works area, excavation works can commence to install the cable ducting and install the crossing structures;
- Under the supervision of an aquatic ecologist, any spawning gravels will be removed at the culvert location and will be temporarily stored in bags at a point greater than 10m from the watercourse;
- Once the lean mix concrete is in place in the trench, a layer of fine sand (5 10cm) will be laid over the concrete prior to final backfilling and structure installation.;
- Only precast concrete culverts or structures will be used for replacement culverts along the 110kV UGC. No batching of wet cement will take place on-site. (Project Design Measure).

Measures to reinstate the watercourses following culvert replacement works

Culvert replacement works along the 110kV UGC, outside the Mountphilips Substation site, will be followed by sitespecific reinstatement measures to ensure the equilibrated restoration of flow character and morphology within the affected reach to achieve baseline character and avoid any deterioration in morphology as required under the Water Framework Directive (WFD). Measures will include:

- bank stabilisation using boulder armour or willow/brush bank protection;
- reinstatement of bank slope and character, creation of compound channels where necessary;
- reinstatement of instream flow features such as boulder substrates, pool / riffle sequences, or spawning cobbles;
- the use of deflector plates during the restoration of flow.

References

IFI (2016) Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters. NRA (2008) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes.

Best Practice Measure GC-BPM-3			
Title:	Best Practice Design of New Permanent Watercourse Crossing Structures and Existing Culver Replacements to Prevent Flood Risk		
Work Sections	/Locatio	ns	
Proposed new permanent watercourse crossings at W1, W2, W3; and Potential replacement of existing culverts on the public road at W13, W14, W15, W17, W19, W20, W32, W34, W55, W57, W60, W61 and W64.			
Responsibility	of	Role/Duty	
Construction N	lanager	Ensure appropriate culvert/bridge design. Supervise the construction works.	
Surface Water	Quality	Protection Measures	
 All new permanent watercourse culverts at the Mountphilips Substation site and any replacement culverts along the public road for the 110kV UGC will be sized to cope with a minimum 100-year flood event. (Project Design Measure): 			
 A freeboard event; 	 A freeboard of 300mm, or as required by OPW, will be kept below the crossing structure during a 100-year flood event; 		
• At a minimum 9	• At a minimum, all new pipe culverts will be 900mm in diameter regardless of the anticipated flood flow (<i>i.e.</i> minimum 900mm culvert will be used in Class 3/Class 4 watercourses regardless of flows);		
 New and re Works (OPV 	• New and replaced permanent crossing structures will be construction in accordance with the Office of Public Works (OPW) guidelines Construction, Replacement or Alteration of Bridges and Culverts (2013),		
• As agreed with OPW (telephone consultation, February 2018) will be subject to a Section 50 application to OPW.			
References			
(DoEHLG, 2009) The Planning System and Flood Risk Management Guidelines; OPW (2013) Construction, Replacement or Alteration of Bridges and Culverts; NRA (2008) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes.			

Best Practice Measure GC-BPM-4					
Title:	itle: Best Practice Surface Water Quality Protection Measures for Site Runoff during the Mountphilips Substation Site Construction Works				
Environmenta	al Comm	itment			
Prevention of	surface v	water quality impacts during the Mountphilips Substation and End Mast Construction Works.			
Work Section	s/Locatio	ons			
Mountphilips	Substati	on Site			
Responsibility	/ of	Role/Duty			
Construction Manager		Monitor weather conditions. Supervise excavation works and drainage works.			
Surface Wate	r Quality	Protection Measures			
 The substate to avoid ur 	tion com	pound and end mast construction work area will be marked out with fencing or flagging tape ry disturbance of vegetation;			
• A minimur stream to the stre	n 25-me the west	ter vegetative buffer zone will be maintained between the substation works area and the of the site;			
• There will l the 25m b	pe no sto uffer zon	rage of material / equipment, excavated overburden or overnight parking of machinery inside e;			
 Before any The first lin be placed 	r ground ne of the 5m from	works are undertaken, double silt fencing will be placed upslope of the local watercourses. silt fencing will be placed 25m from the stream bank and the second line of silt fencing will the stream bank;			
 Double silt north of th 	 Double silt fencing will also be placed along the watercourses (drains) which run along the field boundary to the north of the proposed site; 				
 Additional natural sur 	silt fenci face dep	ng or temporary rectangular straw bales (pinned down with stakes) will be placed across any ressions / channels that slope towards the local stream;			
 Silt fencing 	g will be e	embedded into the local soils to ensure all site water is captured and filtered;			
 As the ear substation compound 	 As the earthworks proceeds at the substation site, permanent earthen berms will be constructed around the substation compound site, and these berms will be used to contain surface water runoff during the substation compound work; 				
• Silt fencing	 Silt fencing will be placed along the base of the berms until they have vegetated; 				
 As constru contained low points 	 As construction advances, there will a requirement to collect and treat small volumes of surface water that is contained within the footprint of the compound. This will be completed using perimeter swales and sumps at low points inside the compound; 				
 Water will From the s stream; 	 Water will be pumped from the sumps into a settlement pond(s) which will allow primary settlement of solids. From the settlement pond(s), water will be pumped to a proposed percolation area, at least 25m from the loca stream; 				
 Discharge sediment f fencing; 	 Discharge onto vegetated ground at the percolation area will be via a silt bag. This action will filter any remaining sediment from the pumped water. The entire percolation area will be enclosed by a perimeter of double sil fencing; 				
Any sedim	ent lader	n water from the works area will not be discharged directly to a watercourse or drain.			
 The constr minimum fencing, st 	 The construction works areas for the End Masts is located on the western side of the local stream, and a minimum 25-meter vegetative buffer zone will be maintained between the works area and the stream. Silt fencing, straw bales and sediment treatment will be arranged as described for the substation works; 				
 Excavation rain is fore 	 Excavation works will not take place during periods of heavy rainfall and will be scaled back or suspended if heavy rain is forecasted; 				
 Daily moni area will b 	 Daily monitoring of the compound works area, the water treatment and pumping system and the percolation area will be completed by a suitably qualified person during the construction phase. All necessary preventative 				

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measures will be implemented to ensure no entrained sediment, or deleterious matter is discharged to the local stream;

- If high levels of silt or other contamination is noted in the pumped water or the treatment systems, all construction works will be stopped. No works will recommence until the issue is resolved and the cause of the elevated source is remedied;
- As a final catch-all contingency, a mobile 'Siltbuster' or similar equivalent specialist treatment system will be available at the substation compound in order to treat sediment entrained waters from the excavation should it be required. Siltbusters are mobile silt traps that can remove fine particles from water using a proven technology and hydraulic design in a rugged unit. The mobile units are specifically designed for use on construction-sites with sensitive downstream receptors;
- There will be no batching or storage of cement within 30m of the local stream;
- There will be no refueling allowed within 100m of the local stream; and,
- All plant will be checked for purpose of use prior to mobilisation at the site.

References

IFI (2016) Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters.

NRA (2008) Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes.

CIRIA (Construction Industry Research and Information Association) Report No. C648, 2006: Guidance on 'Control of Water Pollution from Linear Construction Projects.

CIRIA Report No. C532, 2006: Control of Water Pollution from Construction Sites - Guidance for Consultants and Contractors.

Best Practice Measure GC-BPM-5			
Title:	Best Pra Based C	Best Practice Measures to Protect Surface Water and Groundwater Quality during use of Cement Based Compounds	
Environmental Commitment			
Prevention of	Prevention of surface water and groundwater quality impacts during use of Cement Based Compounds.		
Work Sections	Work Sections/Locations		
110kV UGC Mountphilips Substation Site			
Responsibility of		Role/Duty	
Construction Manager		Monitor weather conditions. Ensure best practice storage and use of Cement Based Compounds.	
Measures			
• Only precast concrete culverts or structures will be used at the 3 no. watercourse crossing locations at			

- Only precast concrete culverts or structures will be used at the 3 no. watercourse crossing locations at Mountphilips Substation site and for any culvert replacements along the 110kV UGC. Only precast concrete chambers will be used at Joint Bay locations. No batching of wet cement will take place on-site. (Project Design Measure)
- Only chutes will be washed out on site; at Mountphilips Substation site, chute washout will be into the
 designated concrete wash settlement pond; along the 110kV UGC, chute washout will be at the works locations
 into the cable trench. At works locations within the Lower River Shannon SAC boundary, the concrete chute
 washouts will take place into designated bins for removal to the designated concrete wash settlement pond at
 the Mountphilips Substation site. In all cases, the washout of the tank will take place at the concrete supplier
 depot. (Project Design Measure)
- Any spills no matter how small or material or overburden contaminated with cement mix will be moved off-site for disposal at a licensed facility;
- Outfalls or natural pathways (*i.e.* preferential flow paths) from excavations towards any local drain or watercourse will be prevented. Outfalls or natural pathways will be temporarily blocked using sand bags and geotextile until the cement mix has set;
- The pour site will be kept free of standing water and plastic covers will be ready in case of sudden rainfall event
- At watercourse crossing locations, a layer of fine sand (5 10cm) will be placed over the cement mix within the trench prior to final backfilling. This will prevent release of cement into the watercourse when flow is restored.

References

IFI (2016) Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters. NRA (2008) Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes. CIRIA (Construction Industry Research and Information Association) 2006: Guidance on 'Control of Water Pollution from Linear Construction Projects' (CIRIA Report No. C648, 2006) CIRIA 2006: Control of Water Pollution from Construction Sites - Guidance for Consultants and Contractors.

Best Practice Measure GC-BPM-6			
Title:	Best Pr Handlin	actice Measures to Protect Surface Water and Groundwater Quality During Storage and g of Fuels, Oils and Chemicals	
Environmenta	Environmental Commitment		
Prevention of	water qu	uality impacts during storage and handling of fuels, oils and chemicals.	
Work Section	s/Locatio	ons	
Construction	works ar	ea boundary	
Responsibility	y of	Role/Duty	
Construction Manager		Monitor weather conditions. Ensure best practice use and storage of fuels, oils and chemicals on-site.	
Manage of or	n-site ref	ueling	
 On site re- bowser, a a 4x4 jeep There will 	fueling o double-a to where be no ref	f immobile machinery will be carried out using a mobile double skinned fuel bowser. The fuel xel custom-built refueling trailer will be re-filled off site, and will be towed around the site by e machinery is located; fuelling of vehicles or plant permitted within 100m of a watercourse;	
• NODILE ITE	asures s	uch as unp trays and ruer absorbent mats will be used during all refueling operations,	
Storing fuel p	roperly		
 There will The fuel b only design The main f location, a All fuel will The design 	 There will be no storage of fuel or refueling or mobile plant permitted within 100m of a watercourse. The fuel bowser will be parked on a level area in the temporary construction compound when not in use and only designated, trained and competent operatives will be authorised to refuel plant on site; The main fuel stocks for, and chemical wastes arising from, construction activities will be stored in a designated location, away from main traffic activity, within the temporary compound at the Mountphilips Substation site. All fuel will be stored in bunded, locked storage containers. 		
Avoid leakage	e from pl	ant and tools	
 The plant, All generative be placed 	 The plant, machinery and tools used during construction will be regularly inspected for leaks, fitness for use; All generators and suction pumps used at watercourse crossing locations will have a double skinned fuel tank or be placed on a drip tray. 		
Contingency	or spilla	ges	
 Spill respo vehicle and Spill respo storage loc The Enviro – see TAB Any spills in disposal at 	 Spill response apparatus including spill-kits and hydrocarbon absorbent packs will be stored in the cabin of each vehicle and operators will be fully trained in the use of this equipment (Project Design Measure); Spill response apparatus including spill-kits and hydrocarbon absorbent packs will be stored at the designated storage location in the temporary compound and all operators will be fully trained in the use of this equipment. The Environmental Emergency Response Procedure will be implemented immediately in the event of any spills – see TAB 6 of the Environmental Management Plan for UWF Grid Connection; Any spills no matter how small or material or overburden contaminated with fuel/oil will be moved off-site for disposal at a licensed premise. 		
References			
CIRIA (Constru- of Water Pollu CIRIA Report Contractors.	uction In ution from No.C532	dustry Research and Information Association) Report No. C648, 2006: Guidance on 'Control m Linear Construction Projects. 2, 2006: Control of Water Pollution from Construction Sites-Guidance for Consultants &	

Best Practice Measure GC-BPM-7			
Title:	Best Pra Mountp	Best Practice Measures to Protect Surface Water Quality During Storage of Overburden at the Mountphilips Substation Site	
Environmental Commitment			
Prevention of surface water quality impacts during Permanent Storage of Overburden at the Mountphilips Substation Site.			
Work Sections/Locations			
Mountphilips Substation Site			
Responsibility	of	Role/Duty	
Construction Manager		Monitor weather conditions. Supervise overburden works.	
Surface Water Quality Protection Measures			
• At Mountphilips Substation site, all excavated material will be removed for temporary or permanent storage at			

- designated berms, which will be located more than 25m away from the watercourses on Mountphilips Substation site. (Project Design Measure)
 All storage berms will be graded and sealed following emplacement. The berms will be covered if there is a risk
- All storage berms will be graded and sealed following emplacement. The berms will be covered if there is a risk of erosion. (Project Design Measure)
- Temporary silt control methods such as silt fencing will be placed around all overburden storage areas. (Project Design Measure)
- The existing vegetative buffer between the berms and the nearest watercourses will be maintained and no works will occur in the buffer zone. (Project Design Measure)
- The permanent storage berms around the substation compound will be sown with grasses and flower species common to the surrounding vegetation. The permanent storage berms along the new access road will be planted with local provenance native fruiting hedge species, with grasses and native flower species sown along the sides of the berms. Revegetation works will take place at the soonest practicable opportunity after emplacement. (Project Design Measure)
- At permanent storage areas along proposed permanent access roads, silt trap / silt fence arrangements will be
 placed within the proposed road drainage and left in place until the mound has been stabilised by vegetation;
- All permanent overburden storages areas will be checked / monitored daily until stabilised to ensure no drainage issues of surface water quality impacts are occurring.

References

IFI (2016) Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters; NRA (2008) Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes CIRIA C648 (2006) Control of Water Pollution from Linear Construction Sites;

Best Practice Measure GC-BPM-8

Best Practice Measures for Minimising Dust Emissions from Site Activities

Environmental Commitment

Title:

Minimise dust emissions from site activities

Work Sections/Locations

All construction works locations

Responsibility of Role/Duty

Construction Manager Provide site induction to site personnel and contractors regarding the dust control measures

Training and Communication

- Provide site induction to site personnel and contractors regarding the dust control measures.
- Community engagement before works commence will be carried out.
- The name and contact details of the Community Liaison Officer and Environmental Clerk of Works will be displayed on the informational signage at the Mountphilips Site Entrance. The Community Liaison Officer and the Environmental Clerk of Works will be the point of contact regarding air quality and dust issues.

Measures to minimize dust emissions

- Public roads works areas will be regularly inspected for cleanliness, and swept to remove mud and aggregate materials from their surface, as necessary;
- the private paved road in Knockcurraghbola Commons will also be regularly inspected for cleanliness, and swept to remove mud and aggregate materials from its surface, as necessary;
- Any road that is likely to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions;
- The new access road at Mountphilips Substation site will be restricted to essential site traffic;
- There will be a 20 km/hr speed limited at the Mountphilips Substation site;
- During movement of materials both on and off-site, truck loads will be covered with tarpaulin.
- A dry wheel wash will be used at the Mountphilips Substation site entrance, if required;
- Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Materials will be adequately covered, especially if being stored for long periods of time to prevent dust emissions primarily during dry or windy periods.
- Permanent stockpiles of soil, at Mountphilips Substation site, will be reseeded as soon as practical following placement;
- If dust issues start to occur, additional measures will be put in place as per 'Guidance on the Assessment of Dust from Demolition and Construction';
- Site induction will be provided to site personnel and contractors regarding the dust control measures.

References

TII, 2011: Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes

IAQM, 2014: Guidance on the Assessment of Dust from Demolition and Construction

Best Practice Measure GC-BPM-9			
Title:	le: Local Employment and Local Sourcing		
Environmenta	I Commit	tment	
Where feasible Connection	Where feasible, to source contracts, materials and workforce locally during the construction stage of the UWF Grid Connection		
Responsibility	of	Role/Duty	
Construction Manager		Where possible, to operate a local bias when recruiting employees and sourcing materials. Develop a Local Employment and Local Sourcing Policy	
Community Officer (CLO)	Liaison	Management of local employment and resources database. Engage with service businesses in the area ahead of construction works. Monitor the recruitment and training of local employees in line with Policy.	
Increasing pot	Increasing potential for local sourcing and local employment		
 Contact local business ahead of works and contracts being awarded, so that the main contactors are aware of the services and materials available locally. 			
 Management of local employment and resources database. 			
 Engage with service businesses in the area ahead of construction works. 			

• Monitor the recruitment and training of local employees in line with Policy.

	Best Practice Measure GC-BPM-10		
Title:	Measur	ing Operational EMF Emissions	
Environmenta	l Commi	tment	
Confirmatory o	of levels (of Electromagnetic Field emissions	
Work Sections	/Locatio	ns	
Mountphilips	Mountphilips Substation and 110kV UGC route		
Responsibility of		Role/Duty	
Operational M – UWF	/lanager	Ensure operational EMF emissions are measured.	
Measuring Op	erationa	I EMP Emissions	
 A confirmatory survey of Electromagnetic Field emissions from the Mountphilips 110kV Substation and from locations along the 110kV UGC will be carried out by a competent engineer following commissioning of the UWF Grid Connection. 			
 Reporting b 	• Reporting by the competent engineer of the operational EMF emission levels with the levels.		
References			

UWF Grid Connection EIA Report (2019)

Best Practice Measure GC-BPM-11				
Title:	Measu	Measuring Operational Electricity Production		
Work Sections	Work Sections/Locations			
Consented Up	perchur	ch Windfarm Substation		
Responsibility of		Role/Duty		
Operational N – UWF	/lanager	Record annual electricity production levels		
Annual Renewable Electricity Production				
 Recording and reporting of the annual renewable electricity production of the operational Upperchurch Windfarm. 				
References				
UWF Grid Connection EIA Report (2019)				