Component Features of the Proposed Development relevant to the Water Environment

This Appendix details out the activities associated with each project component including ancillary development, and discusses their potential impacts on the water environment.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
630m Length of Access Track and Underground Cabling within the Burn of Arisdale Catchment As shown on Figure 15.1	Use of Access Track	Increased sediment mobilisation and transport from road material through surface wash.	Access track drains and pot holes would be regularly inspected and cleared/infilled/repaired this would reduce the potential for sediment to mobilise and wash off from the access track surface.
	Vegetation Removal (Dry Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the access track is approximately 3,465m^2. This represents approximately 0.03% of the Burn of Arisdale Catchment area (11,450,700m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 2,930m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat and organic rich soil range from 0cm to 17cm along this section. This is likely to limit the hydraulic connectivity of the surrounding peatland, as a result the loss of this resource in this is unlikely to substantially alter the water move in the peatland as a whole.
	Placement of Aggregate	Disruption to lateral flow (throughflow in peat and runoff) from the placement of aggregate.	The access track would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
470m Length of Access Track and Underground Cabling within the Burn of Neapaback As shown on Figure 15.1	Use of Access Track	Increased sediment mobilisation and transport from road material through surface wash.	Access track drains and pot holes would be regularly inspected and cleared/infilled/repaired this would reduce the potential for sediment to mobilise and wash off from the access track surface.
	Vegetation Removal (Wet Dwarf Shrub Heath)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the access track is approximately 2,585m^2. This represents approximately 0.12% of the Burn of Neapaback Catchment area (2,083,460m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 1260m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat and organic rich soil range from 0cm to 50cm along this section. This is likely to limit the hydraulic connectivity of the surrounding peatland, as a result the loss of this resource in this is unlikely to substantially alter the water move in the peatland as a whole.
	Placement of Aggregate	Disruption to lateral flow (throughflow in peat and runoff) from the placement of aggregate.	The access track would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
3,756m Length of Access Track and Underground Cabling within Burn of Hamnavoe Catchment As shown on Figure 15.1	Use of Access Track	Increased sediment mobilisation and transport from road material through surface wash.	Access track drains and pot holes would be regularly inspected and cleared/infilled/repaired this would reduce the potential for sediment to mobilise and wash off from the access track surface.
	Vegetation Removal (Predominantly Dry Modified Bog With Areas of Semi Improved Grassland and Bare Peat)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the access track is approximately 20,658m^2. This represents approximately 2.8% of the Burn of Hamnavoe Catchment area (746,300m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 27,020m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 17cm to 123cm along this section. The total area of the access track is approximately 20,658m^2. This represents approximately 2.8% of the Burn of Hamnavoe Catchment area (746,300m^2) therefore the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Placement of Aggregate	Disruption to lateral flow (throughflow in peat and runoff) from the placement of aggregate.	The access track would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
4,212m Length of Access Track and Underground Cabling within Green Burn and Burn of Holigarth Catchment As shown on Figure 15.1	Use of Access Track	Increased sediment mobilisation and transport from road material through surface wash.	Access track drains and pot holes would be regularly inspected and cleared/infilled/repaired this would reduce the potential for sediment to mobilise and wash off from the access track surface.
	Vegetation Removal (Dry Modified Bog and Unimproved Acid Grassland/Bare Peat)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the access track is approximately 23,116m^2. This represents approximately 0.6% of the Burn of Green Burn and Burn of Holligarth Catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 28,920m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 134cm to 202cm along this section. This represents approximately 0.6% of the Burn of Green Burn and Burn of Holligarth Catchment area (4,175,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Placement of Aggregate	Disruption to lateral flow (throughflow in peat and runoff) from the placement of aggregate.	The access track would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
1,317m Length of Access Track and Underground Cabling within Burn of Kettlester Catchment As shown on Figure 15.1	Use of Access Track	Increased sediment mobilisation and transport from road material through surface wash.	Access track drains and pot holes would be regularly inspected and cleared/infilled/repaired this would reduce the potential for sediment to mobilise and wash off from the access track surface.
	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the access track is approximately 7,243.5m^2. This represents approximately 0.2% of the Burn of Kettlester catchment area (3,747,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 28,920m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 123cm to 165cm along this section. This represents approximately 0.2% of the Burn of Kettlester catchment area (3,747,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Placement of Aggregate	Disruption to lateral flow (throughflow in peat and runoff) from the placement of aggregate.	The access track would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
1,249m Length of Access Track and Underground Cabling within Burn of Horsewater and Burn of Hummelton Catchment As shown on Figure 15.1	Use of Access Track	Increased sediment mobilisation and transport from road material through surface wash.	Access track drains and pot holes would be regularly inspected and cleared/infilled/repaired this would reduce the potential for sediment to mobilise and wash off from the access track surface.
	Vegetation Removal (Wet Modified Bog, Unimproved Acid Grassland)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the access track is approximately 6,869.5m^2. This represents approximately 0.2% of the Burn of Horsewater and Burn of Hummelton catchment area (2,489,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,340m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 170cm to 372cm along this section. This represents approximately 0.2% of the Burn of Horsewater and Burn of Hummelton catchment area (2,489,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Placement of Aggregate	Disruption to lateral flow (throughflow in peat and runoff) from the placement of aggregate.	The access track would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
Watercourse Crossing WX1	Construction of Watercourse Crossing	Disruption/blockage of watercourse flow from watercourse crossing.	This watercourse crossing (bridge) has been designed to have capacity of a 1 in 200 year flood event based on its estimated contribution area. The watercourse crossing will be design and build in accordance with SEPA's Engineering in the water environment: good practice guide: River Crossings (2010) and other industry best practise.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Industry best practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Watercourse Crossing WX2	Construction of Watercourse Crossing	Disruption/blockage of watercourse flow from watercourse crossing.	This watercourse crossing (culvert) has been designed to have capacity of a 1 in 200 year flood event based on its estimated contribution area. The watercourse crossing will be design and build in accordance with SEPA's Engineering in the water environment: good practice guide: River Crossings (2010) and other industry best practise.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Watercourse Crossing WX3	Construction of Watercourse Crossing	Disruption/blockage of watercourse flow from watercourse crossing.	This watercourse crossing (culvert) has been designed to have capacity of a 1 in 200 year flood event based on its estimated contribution area. The watercourse crossing will be design and build in accordance with SEPA's Engineering in the water environment: good practice guide: River Crossings (2010) and other industry best practise.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Watercourse Crossing WX4	Construction of Watercourse Crossing	Disruption/blockage of watercourse flow from watercourse crossing.	This watercourse crossing (culvert) has been designed to have capacity of a 1 in 200 year flood event based on its estimated contribution area. The watercourse crossing will be design and build in accordance with SEPA's Engineering in the water environment: good practice guide: River Crossings (2010) and other industry best practise.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Watercourse Crossing WX5	Construction of Watercourse Crossing	Disruption/blockage of watercourse flow from watercourse crossing.	This watercourse crossing (culvert) has been designed to have capacity of a 1 in 200 year flood event based on its estimated contribution area. The watercourse crossing will be design and build in accordance with SEPA's Engineering in the water environment: good practice guide: River Crossings (2010) and other industry best practise.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
Watercourse Crossing WX6	Construction of Watercourse Crossing	Disruption/blockage of watercourse flow from watercourse crossing.	This watercourse crossing (culvert) has been designed to have capacity of a 1 in 200 year flood event based on its estimated contribution area. The watercourse crossing will be design and build in accordance with SEPA's Engineering in the water environment: good practice guide: River Crossings (2010) and other industry best practise.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 1 and Associated Hardstanding Area	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,689m^2. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 7,372m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 83cm to 90cm in this area. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0003% of the total Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 2 and Associated Hardstanding Area	Vegetation Removal (Dry Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,666m^2. This represents approximately 0.0.5% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,260m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 99cm to 100cm in this area. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0003% of the total Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 3 and Associated Hardstanding Area	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,704m^2. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 4,378m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 127cm to 136cm in this area. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0003% of the total Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
Turbine 4 and Associated Hardstanding Area	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 4,801m^2. This represents approximately 0.06% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,673m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 104cm to 115cm in this area. This represents approximately 0.06% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0003% of the total Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 5 and Associated Hardstanding Area	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,677m^2. This represents approximately 0.08% of the Green Burn and Holligarth catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,840m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 143cm to 147cm in this area. This represents approximately 0.08% of the Green Burn and Holligarth catchment area (4175000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0005% of the total Green Burn and Holligarth catchment area (4,175,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 6 and Associated Hardstanding Area	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 8,380m^2. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,655m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 118cm to 125cm in this area. This represents approximately 0.05% of the Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0003% of the total Burn of Hamnavoe Catchment area (7,463,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 7 and Associated Hardstanding Area	Vegetation Removal (Unmodified Blanket Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 4,006m^2. This represents approximately 0.09% of the Green Burn and Holligarth catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,690m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 152cm to 160cm in this area. This represents approximately 0.09% of the Green Burn and Holligarth catchment area (4,175,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0005% of the total Green Burn and Holligarth catchment area (4,175,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 8 and Associated Hardstanding Area	Vegetation Removal (Wet Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,513m^2. This represents approximately 0.08% of the Green Burn and Holligarth catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,937m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 126cm to 132cm in this area. This represents approximately 0.08% of the Green Burn and Holligarth Catchment area (4175000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0005% of the total Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
Turbine 9 and Associated Hardstanding Area	Vegetation Removal (Unmodified Blanket Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,635m^2. This represents approximately 0.09% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,672m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 185cm to 189cm in this area. This represents approximately 0.09% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0005% of the total Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 10 and Associated Hardstanding Area	Vegetation Removal (Dry Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,980m^2. This represents approximately 0.1% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,009m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 140cm to 142cm in this area. This represents approximately 0.1% of the Green Burn and Holligarth Catchment area (4175000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0005% of the total Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 11 and Associated Hardstanding Area	Vegetation Removal (Dry Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,837m^2. This represents approximately 0.09% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,500m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 158cm to 163cm in this area. This represents approximately 0.09% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, the loss of peat from these catchments will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0005% of the total Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 12 and Associated Hardstanding Area	Vegetation Removal (Unmodified Blanket Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 4,153m^2. This represents approximately 0.09% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,448m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 197cm to 203cm in this area. This represents approximately 0.09% of the Green Burn and Holligarth Catchment area (4,175,000m^2). Therefore, the loss of peat from these catchments will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represents approximately 0.0006% of the Green Burn and Holligarth Catchment area (4,175,000m^2)Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 13 and Associated Hardstanding Area	Vegetation Removal (Dry Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,825m^2. This represents approximately 0.15% of the Burn of Horsewater and Burn of Hummelton Catchment area (2489000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,860m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 186cm to 197cm in this area. This represents approximately 0.15% of the Burn of Horsewater and Burn of Hummelton Catchment area (2,489,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0009% of the total Burn of Horsewater and Burn of Hummelton Catchment area (2,489,000m^2).Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
Turbine 14 and Associated Hardstanding Area	Vegetation Removal (Unimproved Acid Grassland)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 4,182m^2. This represents approximately 0.1% of the Green Burn and Burn of Holligarth Catchment (4,175,000m^2)). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 2,006m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 184cm to 187cm in this area. This represents approximately 0.1% of the Burn of Green Burn and Burn of Holligarth Catchment (4,175,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0006% of the total the Green Burn and Burn of Holligarth Catchment (4,175,000m^2)Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 15 and Associated Hardstanding Area	Vegetation Removal (Unimproved Acid Grassland)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,741m^2. This represents approximately 0.15% of the Burn of Horsewater and Burn of Hummelton Catchment area (2489000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 5,940m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 154cm to 160cm in this area. This represents approximately 0.15% of the Burn of Horsewater and Burn of Hummelton Catchment area (2,489,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0009% of the total Burn of Horsewater and Burn of Hummelton Catchment area (2,489,000m^2).Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 16 and Associated Hardstanding Area	Vegetation Removal (Dry Modified Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 4,411m^2. This represents approximately 0.1% of the Burn of Kettlester Catchment area (3,747,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 520m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 150cm to 154cm in this area. This represents approximately 0.1% of the Burn of Kettlester Catchment area (3,747,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0006% of the total the Burn of Kettlester Catchment area (3,747,000m^2). Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Turbine 17 and Associated Hardstanding Area	Vegetation Removal (Dry Heath)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the turbine and hardstanding areas is approximately 3,963m^2. This represents approximately 0.15% of the Burn of Horsewater and Burn of Hummelton Catchment area (2489000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 2,409m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 218cm to 228cm in this area. This represents approximately 0.15% of the Burn of Horsewater and Burn of Hummelton Catchment area (2489000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Construction of Turbine Foundations	Increased impermeable area may lead to increased runoff and shorter rainfall-runoff response time.	The area of impermeable foundations is 240m^2 this represent approximately 0.0009% of the total Burn of Horsewater and Burn of Hummelton Catchment area (2,489,000m^2).Therefore, this is low potential for the foundations to substantially alter the runoff within this catchment.
		Impermeable underground structure that may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The foundations of the proposed turbines may cause localised diversions in subsurface flow pathways within the peat around the foundations, but would not substantially alter the overall flow direction within the peat of the Burn of Hamnavoe catchment from high elevations to how elevations and towards watercourses.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery and use of Concrete or Equivalent	Pollution from spills or leakage of concrete or equivalent and fuel, and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Borrow Pit 1	Vegetation Removal (Modified Dry Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the borrow pit areas is approximately 13,395m^2. This represents approximately 0.11% of the Burn Arisdale Catchment area (11,450,700m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 6,981m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat and organic rich soil range from 4cm to 7cm in this area. This is likely to limit the hydraulic connectivity of the surrounding peatland, as a result the loss of this resource in this is unlikely to substantially alter the water move in the peatland as a whole.
	Stone Extraction	Removal of overburden and stone may cause changes to the groundwater recharge.	The total extraction of aggregate is unlikely to substantially alter the groundwater recharge of the low productive metaphoric bedrock aquifer.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Borrow Pit 2	Vegetation Removal (Dry Modified Bog/Bare Ground)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the borrow pit areas is approximately 27,600m^2. This represents approximately 0.37% of the Burn of Hamnvoe Catchment area (7,463,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 31,212m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 59cm to 80cm in this area. This represents approximately 0.37% of the Burn of Hamnvoe Catchment area (7,463,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Stone Extraction	Removal of overburden and stone may cause changes to the groundwater recharge.	The total extraction of aggregate is unlikely to substantially alter the groundwater recharge of the low productive metaphoric bedrock aquifer.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Borrow Pit 3	Vegetation Removal (Modified Wet Bog)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the borrow pit areas is approximately 23,400m^2. This represents approximately 0.15% of urn of Hamnvoe Catchment area (7,463,000m^2) and 0.29% of the Green Burn and Burn of Holligarth Catchment (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 43,436m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 115cm to 130cm in this area. This represents approximately 0.15% of urn of Hamnvoe Catchment area (7,463,000m^2) and 0.29% of the Green Burn and Burn of Holligarth Catchment (4,175,000m^2).Therefore, the loss of peat from these catchments will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Stone Extraction	Removal of overburden and stone may cause changes to the groundwater recharge.	The total extraction of aggregate is unlikely to substantially alter the groundwater recharge of the low productive metaphoric bedrock aquifer.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Borrow Pit 4	Vegetation Removal (Unimproved Acid Grassland/Bare Peat)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the borrow pit areas is approximately 17,900m^2. This represents approximately 0.43% of the Green Burn and Burn of Holligarth Catchment (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within this catchment.
	Peat Removal (Volume of peat to be removed: 11,176m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 175cm to 184cm in this area. This represents approximately 0.43% of the Green Burn and Burn of Holligarth Catchment (4,175,000m^2). Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Stone Extraction	Removal of overburden and stone may cause changes to the groundwater recharge.	The total extraction of aggregate is unlikely to substantially alter the groundwater recharge of the low productive metaphoric bedrock aquifer.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Site Compound and Substation	Vegetation Removal (Unimproved Acid Grassland/Bare Peat)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the substation areas is approximately 1,543m^2. This represents approximately 0.04% of the Burn of Kettlester Catchment area (3,747,000m^2). The total area of the site compound areas is approximately 7970m^2. This represents approximately 0.05% of the Burn of Kettlester Catchment area (3,747,000m^2) and 0.13% of the Green Burn and Burn of Holligarth Catchment (4,175,000m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within these catchments.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Peat Removal (Volume of peat to be removed: 5,186m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 50cm to 88cm in this area. Therefore, the loss of peat from this catchment will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Placement of Aggregate for Hardstanding	Placement of aggregate may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The hardstanding areas would be composed of permeable aggregate (compacted stone). As a result water would be able to flow through the hardstanding and reach the surrounding undisrupted peat, thus maintaining the hydraulic connectivity of the peatland.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Anemometry Mast and Radio Communications Tower	Vegetation Removal (Wet Modified Bog and Wet Dwarf Shrub Heath)	Removal of vegetation reduces interception and evapotranspiration rates and increases runoff.	The total area of the Anemometry Mast areas is approximately 78m^2. This represents approximately 0.001% of the Burn of Hamnavoe Catchment area (7,463,000m^2). The total area of the radio communications tower areas is approximately 35m^2. This represents approximately 0.0002% of the Burn of Neapaback Catchment area (2083460m^2). Therefore, any interception and evapotranspiration rates are unlikely to substantially alter the runoff within these catchments.
	Peat Removal (Volume of peat to be removed: 3680m^3)	Removal of peat may disrupt and/or disconnect the hydraulic connectivity of the peatland in the surrounding area.	The depths of peat range from 0m to 200cm in these areas. Therefore, the loss of peat from these catchments will not substantially alter the overall lateral flow and hydraulic connectivity at the catchment scale.
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Maintenance	Site Inspection by Vehicle/Foot and repairs	Pollution from spills and leaks of fuel and oil from vehicles.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.
Decommission of Principal Features and Restoration	Removal of Principle Features	Decrease in impermeable area leading to pre-development runoff conditions and pre-development rainfall-runoff response time.	No Further Comments.
	Revegetation	Re-vegetation may lead to pre-development interception and evapotranspiration rates and pre-development runoff conditions.	No Further Comments.
	Backfilling	Reinstatement of peat profile may lead to pre-development infiltration rates and to pre-development runoff conditions.	No Further Comments.

Component Features of the Proposed Development Relevant to the Water Environment			
Project Component	**Activities**	**Potential Impacts**	**Comments / Observations**
	Use of Machinery	Pollution from spills or leakage of fuel and oil from use of machinery.	Good industry practice such as pollution prevention measures detailed in Pollution Prevention Guidelines PPG1, PPG21 and PPG22 would reduce the risk and the overall impact if a spill or leakage were to occur.