

Appendix 14.1 Water Features Survey

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 26/10/2017

Location Reference:	SW39A	Bog No:	P0503-01-26		
National Grid Reference:	243424.8387 211640.1229				
Bog Group	Allen	Bog Unit:	Garrymore		
Bog production type	Milled peat/Horticulture?	Active (Y/N):	Yes		
Feature Type:	SW settlement pond and outfall				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Barrow (14)	3,016		River Barrow and River Nore SAC	
Sub-catchment	Barrow SC 010(14_15)	206	Moderate		
Discharge location	SE of bog			1.5km to SAC	
Bog catchment area (Ha)	308				
Field Observations					
Gravity/Pumped Outfall	Gravity				
	No.	Approx. Dimensions:			
Settlement Pond Details:	3 no.	10x70m, 12x50m, 12x50m			
Pumping Station:	n/a	-			
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	On day of inspection, slightly peaty			
• Silt deposition/Accumulation	Yes	Visible in 3 rd pond			
• Evidence of pond maintenance	Yes	Spoil heaps along pond edges			
• Reed growth within ponds	No	-			
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Gravel in spoil heaps			
• Water Quality Measurements	pH: 5.87	Ec: 310	DO: -	Temp: 12.0	Colour: Peaty
Flowing Water Observations					
• Direction of Flow	East to west through ponds, and west into outfall drain				
• Flow Rate Estimate	5-10 L/s				
• Evidence of high flows	No				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	~1m x 1m				
Site Photos taken:	50m U/s:	Y	Discharge:	Y	50m D/s: No Other: Y
Other Observations	Various photographs taken. Was milled peat bog until ~5 years ago. Now Horticulture Bog.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 26/10/2017

Location Reference:	SW68	Bog No:	P0503-01-34		
National Grid Reference:	266794.4707 229663.316				
Bog Group	Allen	Bog Unit:	Ticknevin		
Bog production type	Milled peat	Active (Y/N):	Appears active		
Feature Type:	Settlement pond and outfall				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Barrow (14)	3,016		Long Derries, Edenderry SAC	
Sub-catchment	Figile (14_3)	95	Moderate		
Discharge location	Southern boundary of bog			On boundary of SAC	
Bog catchment area (Ha)	459				
Field Observations					
Gravity/Pumped Outfall	Gravity (but pumped at SW69)				
	No.	Approx. Dimensions:			
Settlement Pond Details:	1 no.	8-10m x 70m			
Pumping Station:	Yes	Downstream at SW69			
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	Looks relatively clean on day of inspection, slightly peaty colour			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Debris mounds to north of pond			
• Reed growth within ponds	No				
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Mineral soil in spoil heaps			
• Water Quality Measurements	pH: 6.07	Ec: 200	DO: -	Temp: 12°C	Colour: Peaty
Flowing Water Observations					
• Direction of Flow	West towards SW69				
• Flow Rate Estimate	-				
• Evidence of high flows	No				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	2-3m wide, 2m deep				
Site Photos taken:	50m U/s:	No	Discharge:	Y	50m D/s: Y Other: Y
Other Observations	Various photos taken. Limited potential for hydrology impact on Long Derries SAC.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 26/10/2017

Location Reference:	SW69	Bog No:	P0503-01-34					
National Grid Reference:	266266.4531 229593.592							
Bog Group	Allen	Bog Unit:	Ticknevin					
Bog production type	Milled peat	Active (Y/N):	Appears inactive					
Feature Type:	Settlement pond and pump sump							
Desk Study Information (to be filled out prior to site visit)								
	Name	Area (km²)	WFD Status	SAC proximity				
Regional Catchment	Barrow (14)	3,016		Long Derries, Edenderry SAC				
Sub-catchment	Figile (14_3)	95	Moderate					
Discharge location	Southern boundary of bog			320m to SAC				
Bog catchment area (Ha)	459							
Field Observations								
Gravity/Pumped Outfall	Pumped outflow							
	No.	Approx. Dimensions:						
Settlement Pond Details:	1 no.	~10x10m						
Pumping Station:	Yes	SW69						
Water Quality Observations	Yes/No	Description:						
• Clean water	Yes	Yes, slight peat colour						
• Silt deposition/Accumulation	Yes							
• Evidence of pond maintenance	Yes							
• Reed growth within ponds	No							
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Mineral soil in spoil heaps						
• Water Quality Measurements	pH: 7.38	Ec: 200	DO: -	Temp: 12.1	Colour: peaty			
Flowing Water Observations								
• Direction of Flow	Pumped to north							
• Flow Rate Estimate	2 no. 23kw pumps (Flight pumps)							
• Evidence of high flows	No							
• Leaking ponds	No – coffer dams around pump station							
• Culverts clear	Yes							
• Dimensions of discharge channel/drain/stream	~2m wide, 1m deep							
Site Photos taken:	50m U/s:	No	Discharge:	Y	50m D/s:	No	Other:	Y
Other Observations	Various photos taken Duty of standby pumps 4-5m lift – old screw pump replaced Limited potential for hydrology impact on Long Derries SAC.							

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 26/10/2017

Location Reference:	SW70	Bog No:	P0503-01-34		
National Grid Reference:	265768.9613 229932.5862				
Bog Group	Allen	Bog Unit:	Ticknevin		
Bog production type	Milled peat	Active (Y/N):	Appears active		
Feature Type:	Settlement ponds and outfall				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Barrow (14)	3,016		Long Derries, Edenderry SAC	
Sub-catchment	Figile (14_3)	95	Moderate	Downstream subcatchment	
Discharge location	Discharge at SW70 flows to east			930m to SAC	
Bog catchment area (Ha)	459				
Field Observations					
Gravity/Pumped Outfall	Gravity				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	10x120m and 10x105m			
Pumping Station:	n/a	Settlement ponds outfall to drain that flows to SW69 pumping station.			
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	Clean on day of inspection – slight peaty colour			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes				
• Reed growth within ponds	-	Not visible from site inspection location			
• Evidence of mineral soil/Marl/Lac Clay exposure	-	No visible from site inspection location			
• Water Quality Measurements	pH:	Ec: 190	DO:	Temp: 11.9	Colour:
Flowing Water Observations					
• Direction of Flow	South via two piped culverts, drain the flows east to SW69				
• Flow Rate Estimate	10-20 L/s				
• Evidence of high flows	No – not apparent				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	1.5-2m wide by 1.5m deep				
Site Photos taken:	50m U/s:	no	Discharge:	Y	50m D/s: no Other: Y
Other Observations	Discharge at SW70 flows to east and enters pumping station at SW69. No potential for hydrology impact on Long Derries SAC.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 26/10/2017

Location Reference:	SW71	Bog No:	P0503-01-27		
National Grid Reference:	265060.7877 228192.4479				
Bog Group	Allen	Bog Unit:	Glashabaun North		
Bog production type	Milled peat	Active (Y/N):	Appears active		
Feature Type:	Settlement ponds and outfall				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Barrow (14)	3,016		River Barrow and River Nore SAC	
Sub-catchment	Figile (14_3)	95	Moderate		
Discharge location	Settlement pond on W boundary of bog			27.5km downstream	
Bog catchment area (Ha)	506				
Field Observations					
Gravity/Pumped Outfall	Gravity				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	2 no. ponds, 8x150m and 8x250m, dog leg ponds			
Pumping Station:	n/a	-			
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	Relatively clean with peaty colour			
• Silt deposition/Accumulation	Yes	Silt in ponds			
• Evidence of pond maintenance	Yes	Debris heaps to south of pond			
• Reed growth within ponds	No	Not evident			
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Shell marl and mineral soil in spoil heaps			
• Water Quality Measurements	pH: -	Ec: -	DO: -	Temp: -	Colour: -
Flowing Water Observations					
• Direction of Flow	west				
• Flow Rate Estimate	Not possible to estimate				
• Evidence of high flows	No, although there was some surface water flowing across the access road to the end of the settlement pond, close to the public road				
• Leaking ponds	No				
• Culverts clear	Yes, appears so				
• Dimensions of discharge channel/drain/stream	2.0m wide by 1.5m deep				
Site Photos taken:	50m U/s:		Discharge:		50m D/s:
					Other:
Other Observations	No water quality completed. No easy access to ponds or outfall drain				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

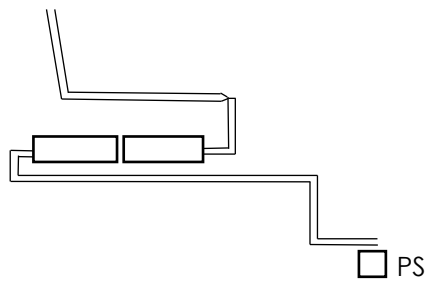
Surveyed By: M. Gill

Date of Survey: 02/02/2018

Location Reference:	SW26	Bog No.	P0500-01-17		
National Grid Reference:	237185.9588 215178.4148				
Bog Group	Boora	Bog Unit:	Monettia		
Bog production type	Horticulture	Active (Y/N):	Yes		
Feature Type:	SW settlement pond outfall				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Barrow	3016		River Barrow and River Nore SAC (2162)	
Sub-catchment	Barrow (14_15)	206	Good	Same subcatchment	
Discharge location	Southeastern corner of bog			650m from settlement pond	
Bog catchment area (Ha)	598				
Field Observations					
Gravity/Pumped Outfall	Pumped 15-05				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	There is inflow Area B, half A 40% to B Also wide drains leading to the settlement ponds, and after the settlement ponds to edge of bog. ~150x15m, and ~195x15m			
Pumping Station:	Yes	Duty and standby – off at the moment. Switched off due to heavy rain (P15-05)			
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	Relatively clear after rainfall			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Spoil heaps to north of ponds			
• Reed growth within ponds	No	Clean ponds			
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Mineral soil in spoil			
• Water Quality Measurements	pH: 7.78	Ec: 435	DO: -	Temp: 6.0	Colour: vs peaty
Flowing Water Observations					
• Direction of Flow	West – east – south to Barrow				
• Flow Rate Estimate	Small flow				
• Evidence of high flows	No – pumped off				
• Leaking ponds	No – outfall draws flow back to bog when pumped				
• Culverts clear	No outfall at discharge – open drain				
• Dimensions of discharge channel/drain/stream					
Site Photos taken:	50m U/s:	Y	Discharge:	Y	50m D/s: N Other: Y
Other Observations	Various photos taken Outfall – 200-300m to River Barrow				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:



BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 23/11/2017

Location Reference:	SW1	Bog No:	P0506-01-02		
National Grid Reference:	266654.8047, 199892.8844				
Bog Group:	Kilberry	Bog Unit:	Kilberry		
Bog production type:	Horticulture	Active (Y/N):	Yes		
Feature Type:	Settlement Pond and outfall location				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment:	Barrow (14)	3,553		River Barrow And River Nore SAC	
Sub-catchment:	Barrow SC 060 (14_18)	273	Good		
Discharge location:	Pond on W of bog			2km to SAC	
Bog catchment area (Ha):	980				
Field Observations					
Gravity/Pumped Outfall	Gravity outfall				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	~10m x 150m, ~10m x 100m with baffles			
Pumping Station:	n/a				
Water Quality Observations:	Yes/No	Description:			
• Clean water	No	Slightly peaty, no visible suspended sediment			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Mounds of peat to north of pond			
• Reed growth within ponds	No	Some grass vegetation at edges of pond			
• Evidence of mineral soil/Marl/Lac Clay exposure	No	Not evident from site inspection locations			
• Water Quality Measurements	pH: 6.65	Ec: 102	DO: 73.1%	Temp: 7.06°C	Colour: Peaty
Flowing Water Observations:					
• Direction of Flow	North, and then towards railway line				
• Flow Rate Estimate	10-20 L/s				
• Evidence of high flows	No				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	Some pond and channel at end of settlement pond, and flows north towards bagging storage areas				
Site Photos taken:	50m U/s:	n/a	Discharge:	Y	50m D/s: n/a Other: Y
Other Observations:	Various photos taken. Outfall drain not easily accessible.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos.

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 23/11/2017

Location Reference:	SW2	Bog No.	P0506-01-02		
National Grid Reference:	267239.418, 201958.3569				
Bog Group:	Kilberry	Bog Unit:	Kilberry		
Bog production type:	Horticulture	Active (Y/N):	Yes		
Feature Type:	Settlement Pond and outfall location				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment:	Barrow (14)	3,553		River Barrow and River Nore	
Sub-catchment:	Barrow SC 060 (14_18)	273	Good		
Discharge location:	SW pond on NW of bog			1.1km to SAC	
Bog catchment area (Ha):	980				
Field Observations					
Gravity/Pumped Outfall	Gravity outfall				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	~8m x 280m			
Pumping Station:	n/a				
Water Quality Observations:	Yes/No	Description:			
• Clean water	No	Slightly peaty, no visible suspended sediment			
• Silt deposition/Accumulation	n/a	Ponds full with water, and hard to see silt accumulation			
• Evidence of pond maintenance	Yes	Mounds of peat/marl to along both ponds			
• Reed growth within ponds	No	Some grass reed growth at edges of pond			
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	In dredged material along edge of both ponds			
• Water Quality Measurements	pH: 6.66	Ec: 120	DO: 70.1%	Temp: 7.36°C	Colour: Peaty
Flowing Water Observations:					
• Direction of Flow	North				
• Flow Rate Estimate	10-20 L/s				
• Evidence of high flows	No				
• Leaking ponds	No, all water contained within ponds				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	~2.8m wide x 1.5m deep, with short channel length to bridge under local road				
Site Photos taken:	50m U/s:	n/a	Discharge:	Y	50m D/s: Y Other: Y
Other Observations:	Various photos taken. Outfall drain photo taken from bridge at road.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos.

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 23/11/2017

Location Reference:	SW3C	Bog No.	P0506-01-02		
National Grid Reference:	270684.254, 201649.88				
Bog Group:	Kilberry	Bog Unit:	Kilberry		
Bog production type:	Horticulture	Active (Y/N):	Yes		
Feature Type:	Settlement Pond and outfall location				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment:	Barrow (14)	3,553		River Barrow and River Nore SAC	
Sub-catchment:	Barrow SC 060 (14_18)	273	Good		
Discharge location:	NW edge of bog			1.1km to SAC	
Bog catchment area (Ha):	980				
Field Observations					
Gravity/Pumped Outfall	Gravity outfall				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	~10m x 120m (both ponds, northern pond added since 2012)			
Pumping Station:	n/a				
Water Quality Observations:	Yes/No	Description:			
• Clean water	Yes	Slightly brown clayey colour, no visible suspended sediment			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Yes, peat and mineral soil evident along edges of both ponds			
• Reed growth within ponds	No	Some grass reed growth at edges of pond			
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Limestone fill in dredged material along edges of ponds			
• Water Quality Measurements	pH: 7.38	Ec: 765	DO: 50.3%	Temp: 8.12°C	Colour: clayey/peaty
Flowing Water Observations:					
• Direction of Flow	Northeast				
• Flow Rate Estimate	<5 L/s				
• Evidence of high flows	No, not evident				
• Leaking ponds	No, not evident				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	Deep peat drain to north, and then to east which joins a drain along the edge of the bog that conveys water to the north and into the stream/drain beside Bradleys Lane. This flows to the east, and then northeast into the Finney River.				
Site Photos taken:	50m U/s:	n/a	Discharge:	Y	50m D/s: Y Other: Y
Other Observations:	Various photos taken.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos.

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 24/1/2018

Location Reference:	SW110	Bog No.	P0504-01-07		
National Grid Reference:	240,486.85 276,506.59				
Bog Group	Mountdillon	Bog Unit:	Coolcraff		
Bog production type	Horticulture	Active (Y/N):	Yes		
Feature Type:	Settlement pond and drainage channel to Inny River				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Upper Shannon (26F)	1,229		Garriskil Bog SAC Code 679	
Sub-catchment	Inny (Shannon) (26F_7)	187	Moderate	Downstream subcatchment	
Discharge location	Southern boundary of bog			Garriskil Bog(10.5km downstream)	
Bog catchment area (Ha)	461				
Field Observations					
Gravity/Pumped Outfall	Gravity				
	No.	Approx. Dimensions:			
Settlement Pond Details:	1 no.	Long pond with drainage channel outfall (80m) to Inny River.			
Pumping Station:	No				
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	Relatively clean water on day of inspection. Heavy rainfall the night before			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Spoil heaps			
• Reed growth within ponds	No	-			
• Evidence of mineral soil/Marl/Lac Clay exposure	No	No mineral soil in spoil heaps			
• Water Quality Measurements	pH: 4.93	Ec: 58	DO: 93.8	Temp: 5.52	Colour: vs. peaty
Flowing Water Observations					
• Direction of Flow	East into Inny River				
• Flow Rate Estimate	High flow, ½ full 450mm pipe				
• Evidence of high flows	Yes – occurring on day of inspection				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	~2m wide by 2m deep				
Site Photos taken:	50m U/s:	Y	Discharge:	Y	50m D/s: Y Other: Y
Other Observations	Various photos taken.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 24/1/2018

Location Reference:	SW111/SW112		Bog No.	P0504-01-07	
National Grid Reference:	240,573.27 277,518.87				
Bog Group	Mountdillon		Bog Unit:	Coolcraff	
Bog production type	Milled peat		Active (Y/N):	Yes	
Feature Type:	Bank of Inny River				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Upper Shannon (26F)	1,229		Garriskil Bog SAC Code: 679	
Sub-catchment	Inny (Shannon) (26F_7)	189	Moderate	Downstream subcatchment	
Discharge location	On western bank of River Inny			Northern point of Garriskil Bog (10kms downstream)	
Bog catchment area (Ha)	461				
Field Observations					
Gravity/Pumped Outfall					
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	SW111 - Long pond with drainage channel outfall (200m) to Inny River. Composite sampler proposed at this location. SW112 – 12m x 120m pond, with shorter outfall drain (35m) to Inny River			
Pumping Station:	No.				
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	Slightly peaty at SW111, cleaner at SW112			
• Silt deposition/Accumulation	Yes	Yes, silt accumulation at entrance to SW112			
• Evidence of pond maintenance	Yes	spoil heaps			
• Reed growth within ponds	No				
• Evidence of mineral soil/Marl/Lac Clay exposure	No				
• Water Quality Measurements	pH:	Ec:	DO:	Temp:	Colour:
• SW111	5.95	57	84.6	5.25	s. peaty
• SW112	4.40	90	90.8	5.25	vs. peaty
Flowing Water Observations					
• Direction of Flow	East/south/east into Inny River				
• Flow Rate Estimate	SW111 – v high flow (2 x 450mm pipes full discharge) SW112 – smaller flow, in order of 40-50 L/s				
• Evidence of high flows	Yes, occurring on day of inspection. Heavy rainfall the night before				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	SW111 – 2.5m wide by 1.5 m deep SW112 – 2.0m wide, 0.8m deep				
Site Photos taken:	50m U/s:	Y	Discharge:	Y	50m D/s: Y Other: Y
Other Observations	Various photos taken at both outfalls Inny River water level was high on day of inspection				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 24/1/2018

Location Reference:	SW103	Bog No.	P0504-01-08		
National Grid Reference:	237624.4271 269656.4109				
Bog Group	Mountdillon	Bog Unit:	Coolnagun Bog		
Bog production type	Milled peat	Active (Y/N):	Yes		
Feature Type:	SW settlement pond outfall				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Upper Shannon (26F)	1,229		Garriskil Bog SAC Code 679	
Sub-catchment	Inny (Shannon) (26F_9)	190	Moderate (Inny_070)	Same sub-catchment	
Discharge location	Settlement pond in centre of bog			Inny River at N end of Garriskil Bog (1.7km)	
Bog catchment area (Ha)	594				
Field Observations					
Gravity/Pumped Outfall	Pumped				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	Large long ponds, 10m X 250m long			
Pumping Station:	Yes	5x5m, x 3.5m deep			
Water Quality Observations	Yes/No	Description:			
• Clean water	No	Peaty on day of inspection			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Spoil heaps, and marl on ground			
• Reed growth within ponds	No	Ponds clear of vegetation			
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Marl on ground at pond edges, and in base of drains around pumping station			
• Water Quality Measurements	pH: 6.97	Ec: 182	DO: 88.4	Temp: 6.61	Colour: Peaty
Flowing Water Observations					
• Direction of Flow	East towards Inny River				
• Flow Rate Estimate	60-80 L/s, high flow				
• Evidence of high flows	Yes				
• Leaking ponds	No				
• Culverts clear	Yes				
• Dimensions of discharge channel/drain/stream	Could not be accessed from inspection location. ~3m wide x 1.5m deep from visual inspection at distance				
Site Photos taken:	50m U/s:	Y	Discharge:	Y	50m D/s: Y Other: Y
Other Observations	Various photos taken. New railway line being installed on eastern headland.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos

BnM IPC Project – Discharge Location Audit Sheet

Surveyed By: Michael Gill

Date of Survey: 24/1/2018

Location Reference:	SW104	Bog No.	P0504-01-08		
National Grid Reference:	236100.9086 269178.3088				
Bog Group	Mountdillon	Bog Unit:	Coolnagun		
Bog production type	Milled peat	Active (Y/N):	Yes		
Feature Type:	SW settlement pond outfall (confirm on ground)				
Desk Study Information (to be filled out prior to site visit)					
	Name	Area (km²)	WFD Status	SAC proximity	
Regional Catchment	Upper Shannon (26F)	1,229		Garriskil Bog SAC Code 679	
Sub-catchment	Inny (Shannon) (26F_9)	190	Moderate (Inny_070)	Same catchment	
Discharge location	W boundary of bog			Garriskil Bog (3.7km)	
Bog catchment area (Ha)	594				
Field Observations					
Gravity/Pumped Outfall	Pumped				
	No.	Approx. Dimensions:			
Settlement Pond Details:	2 no.	Large pond, then pumping station, then second pond. 2 nd pond slightly curved			
Pumping Station:	Yes				
Water Quality Observations	Yes/No	Description:			
• Clean water	Yes	OK, slightly peaty, heavy rainfall the night before			
• Silt deposition/Accumulation	Yes				
• Evidence of pond maintenance	Yes	Spoil heaps			
• Reed growth within ponds	No				
• Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Marl in spoil heaps			
• Water Quality Measurements	pH: 7.43	Ec: 132	DO: 87.3	Temp: 6.68	Colour: s. peaty
Flowing Water Observations					
• Direction of Flow	Southwest				
• Flow Rate Estimate	<10 L/s				
• Evidence of high flows	No				
• Leaking ponds	No				
• Culverts clear	Yes, 2 x 300mm pipes on outfall from second pond				
• Dimensions of discharge channel/drain/stream	~3m wide by 3m deep outfall drain				
Site Photos taken:	50m U/s:	N	Discharge:	Y	50m D/s: Y Other: Y
Other Observations	Various photos taken. Location accessed through farm yard.				

Sketch plan included? Yes: No: (see overleaf if yes).

View of Location/photograph or sketch(es) to be added:

See attached photos.