Appendix 14.1 Water Features Survey

urveyed By: Michael Gill Location Reference:	SW39A				6/10/2017 g No:	P	0503-01-20	4
National Grid Reference:	243424.838	7 2	11640.1229	DO	J NO.	I '	0000-01-20	5
Bog Group	Allen	/ 2	11040.1227	Bog	Unit:		Garrymor	.e
Bog production type	Milled peat	t/Hor	iculture?		ive (Y/N):		Yes	0
Feature Type:			ond and outf				105	
			be filled out		o site visit)			
	Name		Area (km ²)		D Status		SAC proxi	imitv
Regional Catchment	Barrow (14)		3,016				River Barro River Nore	ow and
Sub-catchment	Barrow SC 010(14_15)		206	Мо	derate			
Discharge location	SE of bog						1.5km to S	SAC
Bog catchment area (Ha)	308							
	Fie	ld Ob	servations					
Gravity/Pumped Outfall	Gravity							
	No.	Ар	orox. Dimensi	ons:				
Settlement Pond Details:	3 no.	10x	70m, 12x50m	, 12x50	Эm			
Pumping Station:	n/a	-						
Water Quality Observations	Yes/No	Des	cription:					
Clean water	Yes		day of inspec		slightly peaty	/		
 Silt deposition/Accumulation 	Yes	Visi	ble in 3 rd pon	d				
 Evidence of pond maintenance 	Yes	Spo	oil heaps alon	g por	nd edges			
 Reed growth within ponds 	No	-						
 Evidence of mineral soil/Marl/Lac Clay exposure 	Yes	Gro	avel in spoil he	eaps				
Water Quality Measurements	pH: 5.87	Ec:	310 DO: -		Temp: 12	2.0	Colour: Pe	eaty
Flowing Water Observations								
 Direction of Flow 	Fast to wes	t thrc	ugh ponds, c	and we	est into outfa	III drair)	
Flow Rate Estimate	5-10 L/s		- 3 p 5.100, c					
Evidence of high flows	No							
Leaking ponds	No							
Culverts clear	Yes							
	~lm x lm							
channel/drain/stream			-1			1		1
Site Photos taken:	50m U/s:	Y	Discharge:	Υ	50m D/s:	No	Other:	Y
Other Observations		•	aphs taken. bog until ~5	years	ago. Now Ha	orticult	ure Bog.	

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

See attached photos

Accation Reference: National Grid Reference: Bog Group Bog production type Seature Type: Desk Study Information (to be filled Regional Catchment Sub-catchment Discharge location	Name Barrow (14) Figile (14_3)	pono te vis	it) Area (km²	Bog Act	y No: Unit: ive (Y/N):	Ticknevin	
Bog Group Bog production type Feature Type: Desk Study Information (to be filled Regional Catchment Gub-catchment	Allen Milled peat Settlement out prior to sit Name Barrow (14) Figile (14_3)	pono te vis	d and outfa it) Area (km²	Act			
Bog production type Feature Type: Desk Study Information (to be filled Regional Catchment Sub-catchment	Milled peat Settlement out prior to sit Name Barrow (14) Figile (14_3)	pono te vis	it) Area (km²	Act			
eature Type: Desk Study Information (to be filled Regional Catchment Sub-catchment	Settlement out prior to sit Name Barrow (14) Figile (14_3)	pono te vis	it) Area (km²				active
Desk Study Information (to be filled Regional Catchment Sub-catchment	Out prior to sitNameBarrow (14)Figile (14_3)	te vis	it) Area (km²				
Sub-catchment	Barrow (14) Figile (14_3)						
Sub-catchment	Figile (14_3)		0.01/	WF) Status	SAC prox	imity
			3,016			Long Der Edenderr	
Discharge location			95	Mo	derate		
	Southern boundary c bog	of				On boun SAC	dary o
Bog catchment area (Ha)	459						
ield Observations							
Gravity/Pumped Outfall	Gravity (bu	t pur	nped at SW	69)			
	No.	Ар	prox. Dimen	sions:			
Settlement Pond Details:	1 no.	8-1	0m x 70m				
Pumping Station:	Yes	Do	wnstream a	SW69			
Vater Quality Observations	Yes/No	Des	scription:				
Clean water	Yes	Loc col		clean	on day of insp	ection, slightly	peaty
Silt deposition/Accumulation	Yes						
Evidence of pond maintenance	Yes	De	bris mounds	to nortl	n of pond		
Reed growth within ponds	No						
Evidence of mineral soil/Marl/Lac Clay exposure	Yes	Mir	neral soil in s	ooil hec	sdi		
Water Quality Measurements	pH: 6.07	Ec:	200 DO	: -	Temp: 12°	C Colour: P	eaty
lowing Water Observations			i		· · ·		
Direction of Flow	West towar	ds SV	V69				
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				
iite Photos taken:	50m U/s:	No	Discharg	e: Y	50m D/s:	Y Other:	Y
Other Observations	Various pho Limited pot		aken.		act on Long D	erries SAC.	

Surveyed By: Michael Gill Location Reference:	SW69				-	6/10/2017 No:		P0503-01-	34
National Grid Reference:	266266.453	1 2	29593.59	2	вод	NO.		F0303-01-	34
Bog Group	Allen	1 Z	.27575.57	2	Bog	Unit:		Ticknevin	
Bog production type	Milled peat	+				ve (Y/N):		Appears i	nactive
Feature Type:	Settlement		d and pi	imp su				/ ppcdisi	nachve
Desk Study Information (to be filled				<u>, , , , , , , , , , , , , , , , , , , </u>	ΠP				
	Name		Area (k	m²)	WFD) Status		SAC prox	imity
Regional Catchment	Barrow (14)		3,016	2				Long Derr Edenderr	ies,
Sub-catchment	Figile (14_3))	95		Мос	derate			
Discharge location	Southern boundary o bog	of						320m to S	AC
Bog catchment area (Ha)	459								
Field Observations									
Gravity/Pumped Outfall	Pumped ou	utflov	V						
	No.	Ар	prox. Din	nensio	ns:				
Settlement Pond Details:	1 no.	~10)x10m						
Pumping Station:	Yes	SW	69						
Water Quality Observations	Yes/No	Des	scription						
Clean water	Yes	Yes	s, slight p	eat co	olour				
Silt deposition/Accumulation	Yes								
 Evidence of pond maintenance 	Yes								
 Reed growth within ponds 	No								
 Evidence of mineral soil/Marl/Lac Clay exposure 	Yes	Mir	neral soil	in spoi	l hea	ps			
Water Quality Measurements	pH: 7.38	Ec:	200	DO: -		Temp: 12	2.1	Colour: p	eaty
Flowing Water Observations									
 Direction of Flow 	Pumped to	nort	h						
 Flow Rate Estimate 	2 no. 23kw	pum	ps (Flight	pump	os)				
Evidence of high flows	No				,				
 Leaking ponds 	No – coffer	dam	ns around	d pum	p sta	tion			
Culverts clear	Yes								
 Dimensions of discharge channel/drain/stream 	~2m wide,	1m d	eep						
Site Photos taken:	50m U/s:	No	Disch	arge:	Υ	50m D/s:	No	Other:	Y
Other Observations		ndby	pumps 4			d screw pun act on Long	• •		

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

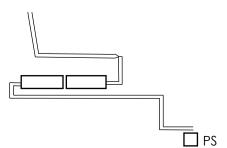
See attached photos

Location Reference:	SW70				Bog	No:		P0503-01-	34
National Grid Reference:	265768.961	3 2	29932.58	362					
Bog Group	Allen				Bog	Unit:		Ticknevin	
Bog production type	Milled pea	†			Activ	'e (Y/N):		Appears	active
Feature Type:	Settlement			utfall					
Desk Study Information (to be filled		ite vis							
	Name		Area (k	(m²)	WFD	Status		SAC prox	
Regional Catchment	Barrow (14		3,016					Long Derr Edenderr	y SAC
Sub-catchment	Figile (14_3	3)	95		Mod	erate		Downstre subcatch	
Discharge location	Discharge SW70 flows east							930m to S	AC
Bog catchment area (Ha)	459								
Field Observations									
Gravity/Pumped Outfall	Gravity								
	No.	Ap	prox. Din	nensio	ns:				
Settlement Pond Details:	2 no.	10x	120m ar	nd 10x1	105m				
Pumping Station:	n/a		tlement nping st		outfo	II to drain th	nat flo	ws to SW6	9
Water Quality Observations	Yes/No	Des	scription	:					
Clean water	Yes	Cle	an on d	ay of ir	nspec	tion – slight	peaty	/ colour	
Silt deposition/Accumulation	Yes								
Evidence of pond maintenance	Yes								
 Reed growth within ponds 	-	No	t visible f	rom sit	e insp	ection loco	ation		
Evidence of mineral soil/Marl/Lac Clay exposure	-	No	visible fr	om site	e inspe	ection locat	tion		
Water Quality Measurements	pH:	Ec:	190	DO:		Temp: 11	1.9	Colour:	
Flowing Water Observations		•							
Direction of Flow	South via t	wo pi	ped culv	verts, d	Irain t	he flows eas	st to S	W69	
Flow Rate Estimate	10-20 L/s								
Evidence of high flows	No – not a	ppare	ent						
Leaking ponds	No								
Culverts clear	Yes								
Dimensions of discharge channel/drain/stream	1.5-2m wid	le by	1.5m de	əp					
Site Photos taken:	50m U/s:	no	Disch	arge:	Y	50m D/s:	no	Other:	Y
Other Observations	•		/70 flows	to eas		enters pur n Long Derr			SW69.

Location Reference:	SW71			Bog No:		P0503-01-2	27
National Grid Reference:	265060.7877	228	192.4479				
Bog Group	Allen			Bog Unit:		Glashabc North	าบท
Bog production type	Milled peat			Active (Y/N	I):	Appears of	active
Feature Type:	Settlement por	nds	and outfall				
Desk Study Information (to be filled	d out prior to site	e visi	it)				
	Name		Area (km²)	WFD Status		SAC proxi	
Regional Catchment	Barrow (14)		3,016			River Barro River Nore	
Sub-catchment	Figile (14_3)		95	Moderate			
Discharge location	Settlement por on W boundar of bog					27.5km downstree	am
Bog catchment area (Ha)	506						
Field Observations							
Gravity/Pumped Outfall	Gravity						
	No.	App	prox. Dimensio	ons:			
Settlement Pond Details:	2 no.	2 no	o. ponds, 8x15	0m and 8x2	50m, dog	g leg ponds	
Pumping Station:	n/a	-					
Water Quality Observations	Yes/No	Des	cription:				
Clean water	Yes	Rela	atively clean v	vith peaty co	olour		
Silt deposition/Accumulation	Yes	Silt i	n ponds				
 Evidence of pond maintenance 	Yes	Dek	oris heaps to s	outh of pond	ł		
Reed growth within ponds	No	Not	evident				
Evidence of mineral soil/Marl/Lac Clay exposure	Yes	She	ll marl and mi	neral soil in s	ooil hea	ps	
Water Quality Measurements	рН: -	Ec:	- DO: -	Ter	np: -	Colour: -	
Flowing Water Observations	L L		I	I		ł	
Direction of Flow	west						
Flow Rate Estimate	Not possible to	est	imate				
Evidence of high flows	No, although t road to the en	here	e was some su		•		cess
Leaking ponds	No					1. 0.0010000	
Culverts clear	Yes, appears s	0					
Dimensions of discharge	2.0m wide by 1		n deep				
channel/drain/stream	 		T	1 1		1	1
Site Photos taken:	50m U/s:		Discharge:	50m	D/s:	Other:	
Other Observations	No water qual No easy acces		•	all drain			

Location Reference:	SW26				Bog	No.		P0500-01-	17
National Grid Reference:	237185.958	8 2	15178.4	4148	3				
Bog Group	Boora	-		-	Bog	Unit:		Monettia	
Bog production type	Horticulture	è				/e (Y/N):		Yes	
Feature Type:	SW settlem	ent p	ond ou	utfall					
	dy Informatio				rior to	site visit)			
	Name	_	Area			Status		SAC prox	imity
Regional Catchment	Barrow		3016					River Barrow River Nore Sy (2162)	
Sub-catchment	Barrow (14	_15)	206		Goo	d		Same subcatch	ment
Discharge location	Southeaste corner of b							650m fron settlemen	
Bog catchment area (Ha)	598								•
	Fie	ld Ob	oservat	ions					
Gravity/Pumped Outfall	Pumped 15	5-05							
	No.	Ар	orox. D	imensio	ns:				
Settlement Pond Details:	2 no.	Also the ~15	o wide settler <u>0x15m</u>	drains le nent po , and ~1	eadin nds to 195x15		lleme og.		
Pumping Station:	Yes		-	standby n (P15-03		at the mor	nent. S	Switched o	off due
Water Quality Observations	Yes/No	Des	criptio	n:					
 Clean water 	Yes	Rel	atively	clear at	fter ra	infall			
 Silt deposition/Accumulation 	Yes								
 Evidence of pond maintenance 	Yes	Spc	il heap	os to nor	th of	ponds			
 Reed growth within ponds 	No	Cle	an por	nds					
Evidence of mineral soil/Marl/Lac Clay exposure	Yes			il in spoi	1				
 Water Quality Measurements 	pH: 7.78	Ec:	435	DO: -		Temp: 6.	0	Colour: vs	s peatv
Flowing Water Observations			'	1					1
Direction of Flow	West – eas	1- 501	ith to P	Sarrow/					
Flow Rate Estimate	Small flow								
			ff						
Evidence of high flows	No – pump			hadit	her	when norm			
Leaking ponds	-				Ŭ	when pum	bea		
Culverts clear	No outfall a	at aiso	Indrge	– open	arair				
 Dimensions of discharge channel/drain/stream 									
Site Photos taken:	50m U/s:	Y	Disc	harge:	Y	50m D/s:	Ν	Other:	Y
Other Observations	Various pho Outfall – 20			iver Bar	row				

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



Location Reference:	SW1			Bog	No:		P0506-01-	02
National Grid Reference:	266654.8047	, 199	892.8844	3				
Bog Group:	Kilberry			Bogl	Jnit:		Kilberry	
Bog production type:	Horticulture				e (Y/N):		Yes	
Feature Type:	Settlement F	onc	l and outfall lo					
Desk Stu	dy Information	n (to	be filled out p	orior to	site visit)			
	Name		Area (km²)	WFD	Status		SAC prox	
Regional Catchment:	Barrow (14)		3,553				River Barro River Nore	
Sub-catchment:	Barrow SC 0 (14_18)	60	273	Goo	d			
Discharge location:	Pond on W of bog	of					2km to SA	(C
Bog catchment area (Ha):	980							
	Field	d Ob	servations					
Gravity/Pumped Outfall	Gravity outfo	all						
	No.	Ар	orox. Dimensio	ons:				
Settlement Pond Details:	2 no.	~10	m x 150m, ~10	0m x 10	00m with bc	affles		
Pumping Station:	n/a							
Water Quality Observations:	Yes/No	Des	cription:					
Clean water	No	Slig	htly peaty, no	visible	suspended	d sedir	nent	
Silt deposition/Accumulation	Yes							
 Evidence of pond maintenance 	Yes	Мо	unds of peat	to nortl	n of pond			
Reed growth within ponds	No	Son	ne grass vege	tation	at edges of	f ponc	ł	
Evidence of mineral soil/Marl/Lac Clay exposure	No		evident from		-			
Water Quality Measurements	pH: 6.65	Ec:	102 DO: 73	3.1%	Temp: 7.0)6°C	Colour: Pe	aty
Flowing Water Observations:								
Direction of Flow	North. and t	hen	towards railw	ay line				
Flow Rate Estimate	10-20 L/s			,				
Evidence of high flows	No							
Leaking ponds	No							
Culverts clear	Yes							
Dimensions of discharge		and	channel at e	nd of a	ettlement r	oond	and flows	north
channel/drain/stream			g storage are				GIIG 10775	
Site Photos taken:		1/a	Discharge:	Y	50m D/s:	n/a	Other:	Y
Other Observations:	Various pho	tos t		ible		1		1

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

See attached photos.

Location Reference:	SW2			Bog N	ο.	P0506-01-0	2
National Grid Reference:	267239.418,	2019	258.3569	2091	•••		
Bog Group:	Kilberry			Bog Ur	nit:	Kilberry	
Bog production type:	Horticulture			Active		Yes	
Feature Type:		onc	and outfall l				
	dy Information	n (to	be filled out	prior to s	ite visit)		
	Name		Area (km²)	WFD S	tatus	SAC prox	imity
Regional Catchment:	Barrow (14)		3,553			River Barr River Nore	
Sub-catchment:	Barrow SC 0 (14_18)	60	273	Good			
Discharge location:	SW pond on NW of bog					1.1km to 3	Sac
Bog catchment area (Ha):	980						
	Field	d Ob	servations				
Gravity/Pumped Outfall	Gravity outfo	all					
	No.	Ар	orox. Dimensi	ons:			
Settlement Pond Details:	2 no.	~8n	n x 280m				
Pumping Station:	n/a						
Water Quality Observations:	Yes/No	Des	cription:				
Clean water	No	Slig	htly peaty, no	visible s	uspended sea	diment	
Silt deposition/Accumulation	n/a	Por	nds full with w	ater, and	d hard to see s	silt accumul	ation
Evidence of pond maintenance	Yes	Мо	unds of peat,	ímarl to a	along both po	onds	
Reed growth within ponds	No	Son	ne grass reed	growth	at edges of p	ond	
Evidence of mineral soil/Marl/Lac Clay exposure	Yes		-	-	g edge of bo		
Water Quality Measurements	pH: 6.66	Ec:	120 DO: 7	0.1%	Temp: 7.36°C	Colour: Pe	aty
Flowing Water Observations:					1 -		
Direction of Flow	North						
Flow Rate Estimate	10-20 L/s						
Evidence of high flows	No						
Leaking ponds		r co	ntained withir	n ponds			
Culverts clear	Yes						
Dimensions of discharge		x 1 5	im deen with	short ch	nannel length	to bridge u	nder
channel/drain/stream	local road	A 1.0			Gineriongin	IS BILLYE U	
Site Photos taken:		ı/a	Discharge:	Y	50m D/s: Y	Other:	Y
Other Observations:	Various pho	tos t	-	1 1	,		<u> </u>

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

See attached photos.

Location Reference:	SW3C				Bog	No.	P0506-01-0)2
National Grid Reference:	270684.254	, 2016	649.88					
Bog Group:	Kilberry				Bogl	Init:	Kilberry	
Bog production type:	Horticulture)			Activ	e (Y/N):	Yes	
Feature Type:	Settlement	Ponc	d and a	outfall lo	catior	1		
Desk Stu	dy Informatio	on (to	be fill	ed out p	rior to	site visit)		
	Name		Area	(km²)	WFD	Status	SAC proxi	
Regional Catchment:	Barrow (14)		3,553				River Barro River Nore	
Sub-catchment:	Barrow SC (14_18)	060	273		Good	b		
Discharge location:	NW edge of bog	of					1.1km to S	AC
Bog catchment area (Ha):	980							
	Fie	ld Ok	oserva	ions				
Gravity/Pumped Outfall	Gravity out	fall						
	No.	Ар	prox. D	imensio	ns:			
Settlement Pond Details:	2 no.	~10 201		0m (bot	'h pon	ds, northern po	nd added si	nce
Pumping Station:	n/a							
Water Quality Observations:	Yes/No	Des	scriptio	n:				
Clean water	Yes	-	htly bro liment	own cla	yey co	blour, no visible :	suspended	
Silt deposition/Accumulation	Yes							
 Evidence of pond maintenance 	Yes	Yes		and mir	neral so	oil evident alon	g edges of k	ooth
Reed growth within ponds	No			ss reed g	growth	at edges of po	ond	
Evidence of mineral soil/Marl/Lac Clay exposure	Yes	-			-	d material along		onds
Water Quality Measurements	pH: 7.38	Ec:	765	DO: 50	.3%	Temp: 8.12°C	Colour: cla peaty	yey/
Flowing Water Observations:							/	
 Direction of Flow 	Northeast							
Flow Rate Estimate	<5 L/s							
Evidence of high flows	No, not evi	dent						
Leaking ponds	No, not evi							
Culverts clear	Yes							
Dimensions of discharge	_	drai	n to no	rth and	then t	o east which jc	ins a drain c	lona
channel/drain/stream	the edge c	of the iin be	bog th side Br	nat conv adleys L	veys w .ane. T	ater to the nort his flows to the	h and into th	ne
Site Photos taken:		n/a		harge:	Y	50m D/s:	Y Other:	Y
Other Observations:	Various ph				<u> </u>			<u> </u>

Bog Group Mountdillon Bog production type Horticulture Feature Type: Settlement por Desk Study Information (to be filled out prior to site vistor) Name Regional Catchment Upper Shannon (26F) Sub-catchment Inny (Shannon) (26F_7) Discharge location Southern boundary of bog Bog catchment area (Ha) 461 Field Observations Gravity Settlement Pond Details: 1 no. Lo Riv Pumping Station: No Age • Clean water Yes Set • Silt deposition/Accumulation Yes Sp • Evidence of pond maintenance Yes Sp • Evidence of mineral soil/Marl/Lac Clay exposure No Ac • Direction of Flow East into Inny R Flowing Water Observations • Direction of Flow East into Inny R Flow Rate Estimate	sit) Area (km²) 1,229 187 187 prox. Dimensing pond with er. scription: latively clear	WFD Store	nit: (Y/N): hel to Inny Rive atus ate channel outf	SAC proxim Garriskil Bog Code 679 Downstrean subcatchm Garriskil Bog(10.5km downstrean	nity g SAC m ient n m)					
Bog GroupMountdillonBog production typeHorticultureFeature Type:Settlement porDesk Study Information (to be filled out prior to site vi NameNameRegional CatchmentUpper Shannon (26F)Sub-catchmentInny (Shannon) (26F_7)Discharge locationSouthern boundary of bogBog catchment area (Ha)461Field ObservationsGravityGravity/Pumped OutfallGravityNo.AgSettlement Pond Details:1 no.Pumping Station:NoWater Quality ObservationsYesClean waterYesEvidence of pond maintenanceYesEvidence of mineral soil/Marl/Lac Clay exposureNoWater Quality MeasurementsPH: 4.93Ecidence of FlowEast into Inny RFlowing Water ObservationsPH: 4.93Ecidence of high flowsYes – occurring	d and draind sit) Area (km²) 1,229 187 187 prox. Dimension ng pond with rer. scription: latively clear anight before	Active age chann WFD Sta Modera sions: a drainage	(Y/N): atus ate channel outf	Yes er SAC proxim Garriskil Bog Code 679 Downstrean subcatchm Garriskil Bog(10.5km downstrean	g ŠAC m ient m)					
Bog production type Horticulture Feature Type: Settlement por Desk Study Information (to be filled out prior to site vi Name Regional Catchment Upper Sub-catchment Inny Sbb-catchment Inny Shannon) (26F_7) Discharge location Southern bog Bog catchment area (Ha) Field Observations Gravity Gravity/Pumped Outfall Gravity No. Ag Settlement Pond Details: 1 no. Pumping Station: No Vater Quality Observations Yes Clean water Yes Suit deposition/Accumulation Yes Evidence of pond maintenance No Reed growth within ponds No Reed growth within ponds No Vater Quality Measurements pH: 4.93 Ec Flowing Water Observations Purpoing State observations pH: 4.93 Ec Flowing Water Observations Plower Quality Measurements pH: 4.93 Ec Flow Rate Estimate High	sit) Area (km²) 1,229 187 187 9 prox. Dimena ng pond with rer. scription: latively clear e night before	Active age chann WFD Sta Modera sions: a drainage	(Y/N): atus ate channel outf	SAC proxim Garriskil Bog Code 679 Downstrean subcatchm Garriskil Bog(10.5km downstrean	g ŠAC m ient m)					
Feature Type: Settlement por Desk Study Information (to be filled out prior to site view in an antipart of the site of shannon (26F) Regional Catchment Upper Shannon (26F) Sub-catchment Inny (Shannon) (26F_7) Discharge location Southern boundary of bog Bog catchment area (Ha) 461 Field Observations Gravity Gravity/Pumped Outfall Gravity Settlement Pond Details: 1 no. Lo Riv Pumping Station: No Reinder Station Water Quality Observations Yes/No Defender Station • Clean water Yes Reinder Station Setthere Station • Silt deposition/Accumulation Yes Spannance Spannance • Reed growth within ponds No - Spannance Spannance • Water Quality Measurements pH: 4.93 Ec Flowing Water Observations Spannance • Direction of Flow East into Inny R Flow Rate Estimate High flow, ½ full Flow Rate Estimate	sit) Area (km²) 1,229 187 187 9 prox. Dimena ng pond with rer. scription: latively clear e night before	Modera Modera sions: drainage	atus ate channel outf	SAC proxim Garriskil Bog Code 679 Downstrean subcatchm Garriskil Bog(10.5km downstrean	g ŠAC m ient m)					
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Sub-catchmentInny (Shannon) (26F_7)Discharge locationSouthern boundary of bogBog catchment area (Ha)461Field ObservationsGravityGravity/Pumped OutfallGravityNo.AppendixSettlement Pond Details:1 no.Lo RivPumping Station:NoAppendixWater Quality ObservationsYes/NoDeferst• Clean waterYesRed the the• Silt deposition/AccumulationYesSpin• Evidence of pond maintenanceNo-• Reed growth within pondsNo-• Water Quality MeasurementspH: 4.93Ec• Direction of FlowEast into Inny R• Flow Rate EstimateHigh flow, ½ ful• Evidence of high flowsYes – occurring	p prox. Dimen ng pond with rer. scription: latively clear e night before	sions: drainage	channel outf	Downstrean subcatchm Garriskil Bog(10.5km downstrean	n m) ny					
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bogBog catchment area (Ha)461Field ObservationsGravityGravity/Pumped OutfallGravityNo.AppendixSettlement Pond Details:1 no.Pumping Station:NoWater Quality ObservationsYes/NoOclean waterYesSilt deposition/AccumulationYesEvidence of pond maintenanceYesReed growth within pondsNoEvidence of mineral soil/Marl/Lac Clay exposureNoUtater Quality MeasurementspH: 4.93Etowing Water ObservationsEast into Inny RFlow Rate EstimateHigh flow, ½ fullEvidence of high flowsYes – occurring	ng pond with rer. scription: latively clear e night before	n drainage		downstrean	n) ny					
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Field ObservationsGravity/Pumped OutfallGravityNo.AppendixSettlement Pond Details:1 no.Lo RivPumping Station:NoDetails:Water Quality ObservationsYes/NoDetails:Clean waterYesRef theSilt deposition/AccumulationYesSpEvidence of pond maintenanceYesSpReed growth within pondsNo-Evidence of mineral soil/Marl/Lac Clay exposureNo-Uater Quality MeasurementspH: 4.93EcFlowing Water ObservationsEast into Inny RFlow Rate EstimateHigh flow, ½ fullEvidence of high flowsYes – occurring	ng pond with rer. scription: latively clear e night before	n drainage								
Gravity/Pumped Outfall Gravity No. Ar Settlement Pond Details: 1 no. Lo Pumping Station: No No Water Quality Observations Yes/No Detector • Clean water Yes Rethector • Silt deposition/Accumulation Yes Person • Evidence of pond maintenance Yes Spannation • Reed growth within ponds No - • Evidence of mineral soil/Marl/Lac Clay exposure No No • Water Quality Measurements pH: 4.93 Ec Flowing Water Observations East into Inny R Flow Rate Estimate • Direction of Flow East into Inny R Flow Rate Estimate High flow, ½ ful	ng pond with rer. scription: latively clear e night before	n drainage								
No.ArSettlement Pond Details:1 no.LoPumping Station:NoRivPumping Station:NoPersonWater Quality ObservationsYes/NoDetails:• Clean waterYesRet• Clean waterYesRet• Silt deposition/AccumulationYesFinder• Evidence of pond maintenanceYesSp• Reed growth within pondsNo-• Evidence of mineral soil/Marl/Lac Clay exposureNoNo• Water Quality MeasurementsPH: 4.93EcFlowing Water ObservationsEast into Inny R• Direction of FlowEast into Inny R• Flow Rate EstimateHigh flow, ½ ful• Evidence of high flowsYes – occurring	ng pond with rer. scription: latively clear e night before	n drainage								
Settlement Pond Details:1 no.Lo RivPumping Station:NoDetails:Water Quality ObservationsYes/NoDetails:• Clean waterYesRe thr• Clean waterYesRe thr• Silt deposition/AccumulationYesFigure 100 (Second 100	ng pond with rer. scription: latively clear e night before	n drainage								
Pumping Station:NoWater Quality ObservationsYes/NoDe• Clean waterYesRe thr• Silt deposition/AccumulationYesFe• Evidence of pond maintenanceYesSp• Reed growth within pondsNo-• Evidence of mineral soil/Marl/Lac Clay exposureNoNo• Water Quality MeasurementspH: 4.93Ec• Direction of FlowEast into Inny R• Flow Rate EstimateHigh flow, ½ ful• Evidence of high flowsYes – occurring	scription: latively clear e night before	n water on								
Water Quality Observations Yes/No Description • Clean water Yes Restrict • Silt deposition/Accumulation Yes Restrict • Silt deposition/Accumulation Yes Spanna • Evidence of pond maintenance Yes Spanna • Reed growth within ponds No - • Evidence of mineral soil/Marl/Lac Clay exposure No No • Water Quality Measurements pH: 4.93 Ection Flowing Water Observations East into Inny R • Flow Rate Estimate High flow, ½ ful • Evidence of high flows Yes – occurring	latively clear e night before		day of inspe	ction. Heavy ro	ainfc					
 Clean water Silt deposition/Accumulation Silt deposition/Accumulation Evidence of pond maintenance Reed growth within ponds Reed growth within ponds Revidence of mineral soil/Marl/Lac Clay exposure Water Quality Measurements PH: 4.93 Ec Flowing Water Observations Direction of Flow East into Inny R Flow Rate Estimate High flow, ½ ful Evidence of high flows 	latively clear e night before		day of inspe	ction. Heavy ro	ainfc					
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 Evidence of pond maintenance Reed growth within ponds Evidence of mineral soil/Marl/Lac Clay exposure Water Quality Measurements PH: 4.93 Ec Flowing Water Observations Direction of Flow East into Inny R Flow Rate Estimate High flow, ½ ful Evidence of high flows Yes – occurring 	oil heaps									
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soil/Marl/Lac Clay exposureWater Quality MeasurementspH: 4.93Flowing Water Observations• Direction of FlowEast into Inny R• Flow Rate EstimateHigh flow, ½ ful• Evidence of high flowsYes – occurring	mineral soil i	n spoil hea								
 Water Quality Measurements pH: 4.93 Ec Flowing Water Observations Direction of Flow East into Inny R Flow Rate Estimate High flow, ½ ful Evidence of high flows Yes – occurring 		, ,								
 Direction of Flow East into Inny R Flow Rate Estimate Evidence of high flows Yes – occurring 	: 58 DO :	93.8	Temp: 5.52	Colour: vs. p	peat					
 Direction of Flow East into Inny R Flow Rate Estimate Evidence of high flows Yes – occurring 	ŀ									
 Flow Rate Estimate Evidence of high flows Yes – occurring 	ver									
Evidence of high flows Yes – occurring		<u>}</u>								
Culverts clear Yes										
	n doon									
Dimensions of discharge ~2m wide by 2i channel/drain/stream										
Site Photos taken:50m U/s:Y	Discharge	e: Y 5	0m D/s:	Y Other:	Y					
Other Observations Various photos	taken.									

Location Reference:	SW111/SW1	12		Bog No)	P0504-01-07
National Grid Reference:	240,573.27	27	77,518.87			
Bog Group	Mountdillor	า		Bog Ur	ıit:	Coolcraff
Bog production type	Milled peat			Active	(Y/N):	Yes
Feature Type:	Bank of Inn					
Desk Study Information (to be filled		te visi				
	Name		Area (km ²)	WFD St	atus	SAC proximity
Regional Catchment	Upper Shannon (2	26F)	1,229			Garriskil Bog SAG Code: 679
Sub-catchment	Inny (Shannon) (26F_7)		189	Moder	ate	Downstream subcatchment
Discharge location	On western bank of Riv Inny					Northern point o Garriskil Bog (10kms downstream)
Bog catchment area (Ha)	461					· · · · · · · · · · · · · · · · · · ·
Field Observations						
Gravity/Pumped Outfall						
	No	A	vov Dimensi	0.005:		
	No.		prox. Dimensi			
Settlement Pond Details:	2 no.	to Ir SW 1	nny River. Co	mposite s	ampler pro	nannel outfall (200m) posed at this locatic ter outfall drain (35m
Pumping Station:	No.					
Water Quality Observations	Yes/No	Des	cription:			
Clean water	Yes	Sligh	ntly peat at S	W111, cle	aner at SW	/112
Silt deposition/Accumulation	Yes	Yes,	silt accumul	ation at e	ntrance to	SW112
Evidence of pond maintenance	Yes	spo	il 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			nto Inny Rive			
Flow Rate Estimate	SW112 – sm	naller t	ow (2 x 450m flow, in order	of 40-50 l	L/s	-
Evidence of high flows	Yes, occurr	ing or	n day of insp	ection. He	eavy rainfa	ll the night before
	No					
Leaking ponds	1					
Leaking pondsCulverts clear	Yes			-1		
	SW111 - 2.5		de by 1.5 m a de, 0.8m dee			
Culverts clearDimensions of discharge	SW111 – 2.5 SW112 – 2.0			ep .	0m D/s:	Y Other: Y

Location Reference:	SW103				Bog	/1/2018 No		P0504-01-	08				
National Grid Reference:	237624.427	1 2	69656.4	1109	bogi	10.		10004-01-	00				
Bog Group	Mountdillor		07000	107	Bog	Init		Coolnagi					
Bog production type	Milled peat					ve (Y/N):		Yes	hibog				
Feature Type:	SW settleme		ond ou	utfall				100					
Desk Study Information (to be filled													
	Name		Area	(km²)	WFD	Status		SAC prox	imity				
Regional Catchment	Upper Shannon (2	26F)	1,229					Garriskil B Code 679	og SAC				
Sub-catchment	Inny (Shannon) (26F_9)		190		Mode (Inny			Same sub catchme					
Discharge location	Settlement pond in centre of b	og						Inny River end of Go Bog (1.7k	arriskil				
Bog catchment area (Ha)	594												
Field Observations													
Gravity/Pumped Outfall	Pumped												
	No.	Ар	orox. Di	imensio	ns:								
Settlement Pond Details:	2 no.	Lar	ge long	g ponds	, 10m)	(250m long	9	base of drains					
Pumping Station:	Yes	5x5	m, x 3.5	ōm deej	þ								
Water Quality Observations	Yes/No	Des	criptio	n:									
Clean water	No	Peo	aty on c	day of ir	nspect	ion							
Silt deposition/Accumulation	Yes												
Evidence of pond maintenance	Yes	Spo	oil heap	os, and r	marl oi	n ground							
Reed growth within ponds	No	Por	nds clea	ar of ve	getatio	on							
Evidence of mineral soil/Marl/Lac Clay exposure	Yes			ound at umping :			d in b	ase of dra	ins				
Water Quality Measurements	pH: 6.97		182	DO: 88		Temp: 6.	61	Colour: Pe	eaty				
Flowing Water Observations				•									
Direction of Flow	East toward	ds Inn	y River										
Flow Rate Estimate	60-80 L/s, hi		-										
Evidence of high flows	Yes	5											
Leaking ponds	No												
Culverts clear	Yes												
Dimensions of discharge	Could not k			t from ir	spoot	ion location	2						
 Dimensions of ascharge channel/drain/stream 	~3m wide x							nce					
Site Photos taken:		Y	1 .	harge:	Y	50m D/s:	Y	Other:	Y				
Other Observations	Various pho New railwa		aken.		1				1				

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

See attached photos

Leadlen Deferrerer	Date of Survey: 24/1/2018							20	
Location Reference:	SW104			BOG	Bog No. P0504-01-08				
National Grid Reference:	236100.9086 269178.3088			D - 1		1	Coolerate		
Bog Group	Mountdillon Milled poat				g Unit: live (X /N):	Coolnagun			
Bog production type	Milled peat		and author /	Active (Y/N): I (confirm on ground)			Yes		
Feature Type: Desk Study Information (to be filled				Contirn	n on ground)				
Desk study information (to be filled	Name	ie vis	Area (km²)		Status		SAC provi	mity	
Regional Catchment	Upper Shannon (26F)		1,229	VVFL	WFD Status		SAC proximity Garriskil Bog SAC		
Regional Calchinem							Code 679		
Sub-catchment	Inny		190	Mo	Moderate		Same catchmen		
	(Shannon)				(Inny_070)				
	(26F_9)								
Discharge location	W boundary						Garriskil Bo	bg	
	of bog						(3.7km)		
Bog catchment area (Ha)	594								
Field Observations	-								
Gravity/Pumped Outfall	Pumped								
	No.	Ар	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	Spo	oil 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: 6.6	68	Colour: s.	peaty	
Flowing Water Observations	<u> </u>	1	I		·	1		,	
Direction of Flow	Southwest								
Flow Rate Estimate	<10 L/s								
Evidence of high flows	No								
Leaking ponds	No								
	Yes, 2 x 300mm pipes on outfall from second pond ~3m wide by 3m deep outfall drain								
Dimensions of discharge channel/drain/stream		Jy Jr	aeep outto	ili arain	l				
channel/drain/stream Site Photos taken:	50m U/s:	N	Discharge	: Y	50m D/s:	Y	Other:	Y	
	-		Discharge	· 1	50m D/S.	I	Omer		
Other Observations	Various photos taken. Location accessed through farm yard.								