Golder Associates

TRANSMITTAL

CELEBRATING 50 YEARS in 2010

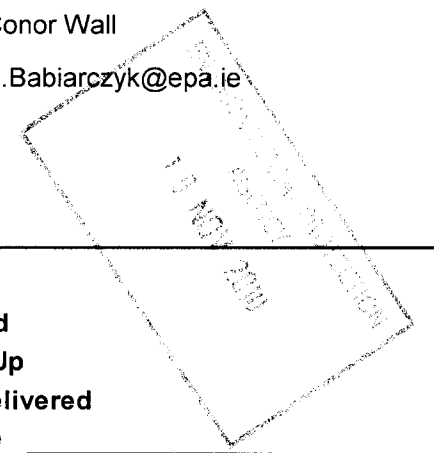
DATE 16th November 2010

PROJECT No. 09 5071 5 0022 Transmittal

TO Eva Babiarczyk
Licensing Administration

FROM Conor Wall

EMAIL E.Babiarczyk@epa.ie



WASTE LICENCE APPLICATION REF. NO. W0254-01

☑ **Mail / Express Post** (select one)
☐ **Same Day Courier** _____
☐ **Air Freight** _____
☐ **Email** _____

☐ **Enclosed**
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☐ **FTP Site** _____

Quantity	Item	Description
2	Hard Copies	Revisions to Drawings, EIS Text and Waste Licence Application Form

Notes

Further information as requested by Ms. Eva Babiarczyk in telephone conversations dated 11th November 2010.

Please advise us if enclosures are not as described.

CW/as

ACKNOWLEDGEMENT REQUIRED:

☑ YES (Please email / fax to Golder Associates) ☐ NO

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Golder Associates Ireland Limited
Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Tel: +353 45 87 4411 Fax: +353 45 87 4549 www.golder.com

Golder Associates: Operations in Africa, Asia, Australasia, Europe, North America and South America

Registered in Ireland Registration No. 297875 Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland
Directors: M. Gilligan, A. Harris (British) VAT No.: 8297875W

E.2 EMISSIONS TO SURFACE WATERS

Surface water run-off during and post restoration activities will be collected in a network of trenches and infiltration drains located on the surface and perimeter of the restored area. It is expected that in most circumstances water will infiltrate directly to ground from these drains, but during storm events water which does not infiltrate will flow along the drains to finally arrive at the new water feature to the west of the Site, and also the Silt Settling Pond C near the entrance to the Facility.

The system on the western boundary will be designed to accommodate the water expected in a 1 – 100 year storm event. Storm water will be accommodated in the new water feature on the western boundary where infiltration to ground will occur through the base and sides. Provision for overflow will also be installed at an elevation of ca. 145 mAOD, with discharge being by means of a pipe to Pond B. For further details on emissions to surface water on the Site refer to section 8.6.4 of the EIS (Volume I) and Drawings WLA-15 and WLA 16 (Revisions C, attached).

E.2.1 Summary of Surface Water Emissions

Table E.2.1 Summary of Emissions to Surface Water

Source	Hardstanding, roads and roofed structures within facility reception and Inert Waste Processing Area (IWPA)	Restored Land Surface	Restored Land Surface	Restored Land Surface
Location	**SW-1:** Outlet from settling Pond C to tributary of Morell River	**SW-2:** Outlet from new surface water feature on western boundary	**SW-3:** Water quality in Pond B.	**SW-4:** Overland flow from south of site
Nature	Surface water run-off	Surface water run-off	Surface water run-off	Surface water run-off
Composition	Water with unknown concentrations of dissolved constituents	Water with unknown concentrations of dissolved constituents	Water with unknown concentrations of dissolved constituents	Water with unknown concentrations of dissolved constituents

Quantity	Volume generated from hardstanding areas at facility reception and IWPA.	Volume generated from restored surface	Volume generated from immediate catchment around Pond B, and overflow from new water feature	Volume generated from Catchment Area F to south of Site (See EIS Figure 8.3)
Level	Unknown	Unknown	Unknown	Unknown
Rate	Variable, depends on rainfall intensity.	Variable – depends on rainfall intensity and infiltration in perimeter ditches.	Variable – depends primarily on overflow rates from new water feature.	Variable, depends on rainfall intensity.

TABLE E.2(i)A: EMISSIONS TO SURFACE WATERS

Emission Point:

Emission Point Ref. N^{o}:	SW 1
Source of Emission:	Outlet from settling Pond C
Location :	North part of Facility adjoining proposed Inert Waste Processing Area (IWPA)
Grid Ref. (10 digit, 5E,5N):	E = 293263 N = 215872
Name of receiving waters:	Tributary of Morell River
Flow rate in receiving waters:	Unavailable $m^3.sec^{-1}$ Dry Weather Flow Unavailable $m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:

(i) Volume to be emitted – Unknown			
Normal/day (estimated)	EIS, Section 8		
Maximum rate/hour	EIS, Section 8		

* 30 year return period

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day 200 day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission

Emission point reference number : **SW1**

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
Suspended Solids						35			

TABLE E.2(i)B: EMISSIONS TO SURFACE WATERS

Emission Point:

Emission Point Ref. N^{o}:	**SW 2**
Source of Emission:	Restored Land Surface
Location :	Outlet from new surface water feature on western boundary
Grid Ref. (10 digit, 5E,5N):	E = 292619 N = 215367
Name of receiving waters:	Retained Pond B
Flow rate in receiving waters:	Unavailable $m^3.sec^{-1}$ Dry Weather Flow Unavailable $m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:

(i) Volume to be emitted – Unknown Emission Point is an overflow from infiltration swale/pond			
Normal/day (estimated)	EIS, Section 8		
Maximum rate/hour	EIS, Section 8		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day ____day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission

Emission point reference number : **SW2**

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
Suspended Solids						35			

TABLE E.2(i)B: EMISSIONS TO SURFACE WATERS

Emission Point:

Emission Point Ref. Nº:	**SW 3**
Source of Emission:	Restored Land Surface
Location :	Retained Pond B
Grid Ref. (10 digit, 5E,5N):	E = 292715 N = 215110
Name of receiving waters:	Not Applicable
Flow rate in receiving waters:	Unavailable _____ $m^3.sec^{-1}$ Dry Weather Flow Unavailable _____ $m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:

(i) Volume to be emitted – Unknown Emission Point is an overflow from infiltration swale/pond			
Normal/day (estimated)	EIS, Section 8		
Maximum rate/hour	EIS, Section 8		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day ____day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS -

Characteristics of the emission

Emission point reference number : **SW3**

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
Suspended Solids						35			

TABLE E.2(i)B: EMISSIONS TO SURFACE WATERS

Emission Point:

Emission Point Ref. N°:	**SW 4**
Source of Emission:	Restored Land Surface
Location :	South of Site, Catchment Area F as depicted in Figure 8.3 of EIS
Grid Ref. (10 digit, 5E,5N):	E = 292660m N = 214643m
Name of receiving waters:	Not Applicable
Flow rate in receiving waters:	Unavailable _____ $m^3.sec^{-1}$ Dry Weather Flow Unavailable _____ $m^3.sec^{-1}$ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:

(i) Volume to be emitted – Unknown Emission Point is an overflow from infiltration swale/pond			
Normal/day (estimated)	EIS, Section 8		
Maximum rate/hour	EIS, Section 8		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included):*

Periods of Emission (avg)	_____min/hr _____hr/day ____day/yr

TABLE E.2(ii): EMISSIONS TO SURFACE WATERS -

Characteristics of the emission

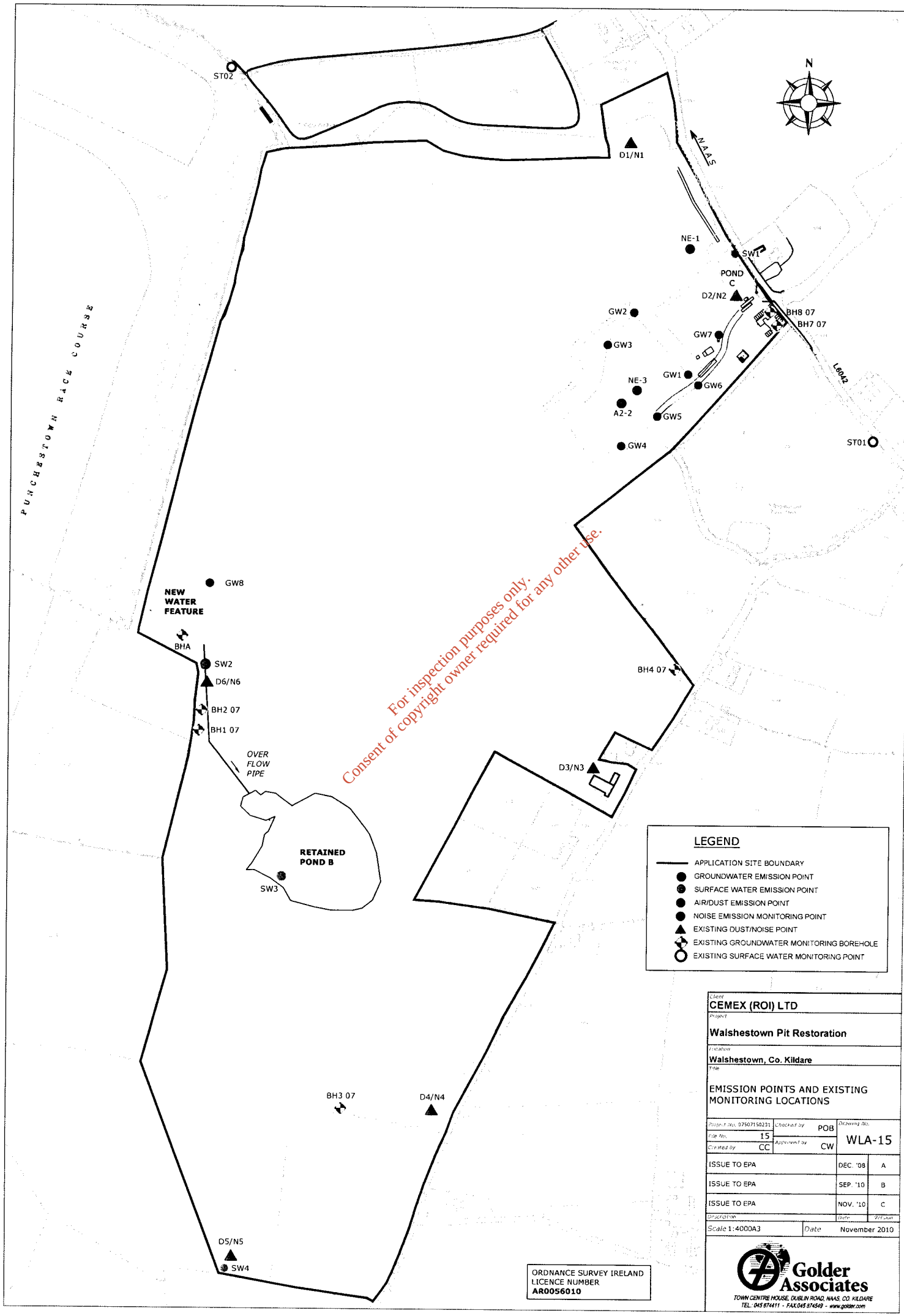
Emission point reference number : **SW4**

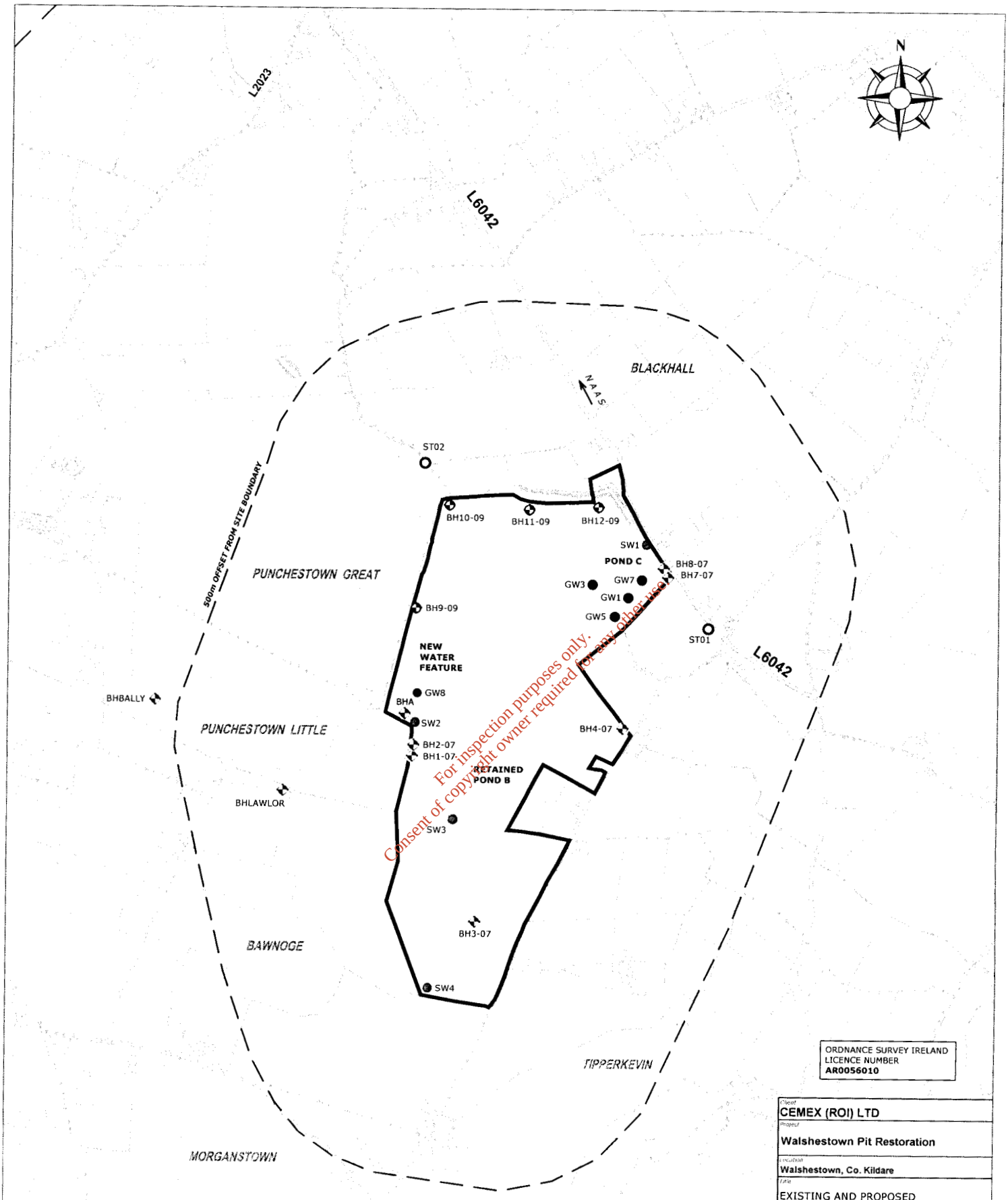
Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
Suspended Solids						35			

Table 8.2: Proposed Site Drainage Conditions – Details of Surface Water Catchments

Catchment Area	Area (ha)	Description	Discharge Outlet/ Water Flows Toward
G	ca. 3.6	Grassed	Runs off to surface water management Pond C, which then discharges to tributary of Morell River
H	ca. 3.1	Grassed	Runs off to infiltration trench on northern and north-eastern boundaries
I	ca. 25	Grassed	Runs off to the new water feature and infiltration trench on western boundary & infiltrates there; stormwater overflow at ca.145 mAOD to Pond B
J	ca. 11.8	Grassed (includes majority of area beside residence to east)	Runs off to constructed surface watercourse feature which feeds to new water feature on western boundary
K	ca. 17.6	Grassed	Some reduction in northern extent of existing catchment E (Figure 8.1 & Table 8.1), otherwise no change; infiltrates directly to ground or runs toward Pond B. No external discharge.
F	ca. 3.4	Grassed	No change: infiltrates directly to ground or runs toward south-western corner of Site; some small runoff off-Site

Note: total catchment area described above is 64.5 ha.





ORDNANCE SURVEY IRELAND
LICENCE NUMBER
AR0056010

LEGEND

- APPLICATION SITE BOUNDARY
- MONITORING BOREHOLE
- STREAM SAMPLING LOCATIONS
- PROPOSED MONITORING BOREHOLE LOCATION IN OVERBURDEN (2009)
- GW EMISSION MONITORING POINT
- SW EMISSION MONITORING POINT

R411

Client: **CEMEX (ROI) LTD**

Project: **Walshestown Pit Restoration**

Location: **Walshestown, Co. Kildare**

Title: **EXISTING AND PROPOSED GROUNDWATER AND SURFACE WATER MONITORING LOCATIONS**

Project No. 0750713023	Checked by: POB	Drawing No.	WLA-16
File No. 16	Approved by: CW		
Created by: CC			

ISSUE TO EPA	DEC. '08	A
ISSUE TO EPA	SEP. '10	B
ISSUE TO EPA	NOV. '10	C

Description | Date | Rev no.

Scale: 1:10,000A3, 1:15,000A4 | Date: November 2010

Golder Associates
TOWN CENTRE HOUSE, DUBLIN ROAD, NAAS, CO. KILDARE
TEL: 045 874411 - FAX:045 874549 - www.golder.com