793/13 618.00

WATER (NORTHERN IRELAND) ORDER 1999

MAIN APPLICATION FORM (WO1)

Application for new consent/ variation to an existing consent* to discharge (*delete as appropriate)			
(*delete as appropriate)	1	MAY	2013

NB: If application is in respect of a single domestic dwelling a separate form (WO2) should be completed.

RETURN TO:

Northern Ireland Environment Agency Water Management Unit 17 Antrim Road LISBURN Co Antrim BT28 3AL

Tel: 028 9262 3034

Official Use Only

File Ref: T95/13

Date Received:

Applic Fee Received:

Yes £118

Each applicant must complete this main form and separate Annexes as required. Please look through the form and read the notes carefully before you complete it. Processing of your application will be aided by full and accurate completion of all the relevant sections and provision of the necessary plans. If you have any queries about the form please telephone the above number.

NOTE:

All information contained within this application will be made available on the public register unless there is a request to withhold any of it. Any such request should provide a full justification stating why the information should be withheld.

- 1 SITE ADDRESS
- 1.1 Address or other sufficient description of land or premises to which this application applies.

Address: Curraghinalt, Gortin, Co. Tyrone.

Description: Mineral Exploration involving the extension of the existing

underground exploration tunnel at Curraghinalt.

Post Code

BT 797SF

Northern Ireland Environment Agency



DETAILS OF RECEIVING ENVIRONMENT	
Is there a foul sewer available to which the discharg (see note viii) If yes, please state why it is not practical to connect	1,63
, The state of the place of the conflect	to it (eg, distance, now etc)
DETAILS OF APPLICANT AND OTHER INFORMA	ATION
(See general notes and note xi)	
(a) Full name and postal address of applicant. consent holder should consent be granted.	This should be the person who will become
Mr.	
Managing Director, Dalradian Gold Ltd.	
3 Killybrack Road, Omagh	
Post Code: BT 79 7DG	
E-mail Address: Com Daytime Telephone Number:	
- Symme receptione Number.	Fax: 028 82257562
Company Registration Number (if appropriate):	VI 008465
(b) Agent (if any) - Full name and postal address	5:
SLR Consulting Ltd. 24 Ballynahinch St	
Hillborough, Co. Down	
Post Code: BT 26 6AW	
E-mail Address: Iting.com	
Daytime Telephone Number:	Fax: 028 926 81 037
Please give full name and address to which invoices f different to that given above:	or any annual charges should be sent if
See Section 5.1 (a) above	122
	89
Post Code: BT	
-mail Address:	
Daytime Telephone Number: 028	Fax: 028

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FILE NO:

TC 40/12

DEPARTMENT OF THE ENVIRONMENT

Water (Northern Ireland) Order 1999

Consent to Discharge of Effluent

TO: Mr

Director
Dalradian Gold Ltd
3 Killybrack Road
Killybrack Business Park
Omagh
Co Tyrone
BT79 7DG

The Department of the Environment in pursuance of the powers conferred on it by the Water (Northern Ireland) Order 1999 HEREBY CONSENTS to your making a discharge into the waterway at Irish Grid Reference H 5704 8671 in accordance with the application dated 06 March 2012 in respect of a discharge of site drainage arising from mineral exploration drilling in an existing underground adit at Curraghinalt, Gortin, Co Tyrone.

SUBJECT TO the following conditions:

- 1. The effluent discharged to the waterway shall not:
 - a. contain suspended solids in excess of 50 milligrams per litre (measured after drying at 105°C);
 - b. have a biochemical oxygen demand in excess of 10 milligrams per litre (measured after 5 days at 20°C with nitrification suppressed by the addition of allyl-thiourea);
 - c. have a pH value less than 6 nor greater than 9;
 - d. contain any visible oil or grease;
 - e. contain any substance (other than as defined above) which will cause the waterway or water in an underground stratum to be toxic or injurious to fish or other aquatic organisms;

FILE NO:

TC 40/12

DEPARTMENT OF THE ENVIRONMENT

Water (Northern Ireland) Order 1999

Consent to Discharge of Effluent

- f. contain any substance (other than as defined above) to such an extent as to cause the receiving waters, or any waters of which the receiving waters are a tributary, to be poisonous or injurious to the spawning grounds, spawn or food of fish in those waters, or otherwise cause damage to the ecology of those waters.
- sampling of the discharge shall be carried out monthly by the consent holder and reported to the Department quarterly. The sample shall be analysed for the parameters listed in condition 1 a d. In addition the sample shall also be analysed for the parameters listed below. A sample shall also be taken immediately upstream and 5 metres downstream of the confluence of the field drain and the Curraghinalt Burn, and analysed on each occasion for the same parameters.
 - i) total zinc
 - ii) dissolved chromium
 - iii) dissolved nickel
 - iv) dissolved arsenic
 - v) dissolved mercury
 - vi) dissolved cadmium
 - vii) dissolved iron
 - viii) dissolved lead
 - ix) total hardness as Ca Co₃

Where levels of any of the substances listed in i-xv above are detected in a concentration likely to cause a breach of the Environmental Quality Standard (EQS) in the receiving water, then Action Plans to reduce the substances in question in the discharge must be developed and agreed with the Department.

FILE NO: TC 40/12

DEPARTMENT OF THE ENVIRONMENT

Water (Northern Ireland) Order 1999

Consent to Discharge of Effluent

- Facilities shall be available to ensure that a representative sample of the 2. discharge can be obtained. The sampling point shall be located after the treatment system.
- The sample point for this discharge shall be labelled and maintained so that it is 3. freely available and accessible to authorised officers of the Department.
- Authorised officers of the Department shall be allowed to readily and safely obtain 4. a sample of the effluent, measurement of flow, images of discharge or other data relative to the discharge at all times.
- The treatment system shall be maintained to ensure that the consent conditions 5. are met at all times.
- Under the requirements of the Control of Pollution (Oil Storage) Regulations 6. (Northern Ireland) 2010 all oil storage must comply with the appropriate requirements as laid out in the regulations. Oil in the regulations is defined as "any kind of oil, including diesel, heating, waste, vegetable and plant oil". The only exemptions to the regulations are: (a) any property used mainly as a private dwelling if the storage capacity is 3500 litres or less, (b) any storage below 200 litres, (c) any storage on a farm regulated by COMAH or (e) any container wholly underground.
- Bunds shall be provided around all chemical storage tanks to reduce the risk of pollution of waterways and groundwater from spillage or leakage.
- The storage of any chemicals or dangerous substances not listed on the original 8. consent application shall be notified immediately to the Department.
- Any change of process, or introduction of new process chemicals not specified on 9. the original consent application shall be notified immediately to the Department.
- 10. The discharge shall not cause any visible change to any part of the waterway either at the discharge point or at any point downstream.

FILE NO:

TC 40/12

DEPARTMENT OF THE ENVIRONMENT

Water (Northern Ireland) Order 1999

Consent to Discharge of Effluent

- 11. The person making the discharge to which this consent relates shall be responsible at all times for compliance with all consent conditions and payment of all annual charges.
- 12. Should the consent holder wish to transfer responsibility for this consent they must submit an application for transfer of ownership within 21 days of the transfer taking place.
- 13. If the consent holder intends to change anything at the site which will impact on the content of this consent and / or the composition or quality of the effluent then they must make application to the Department for review of this consent. Review application should be made no later than 4 months before the proposed changes will be carried out.

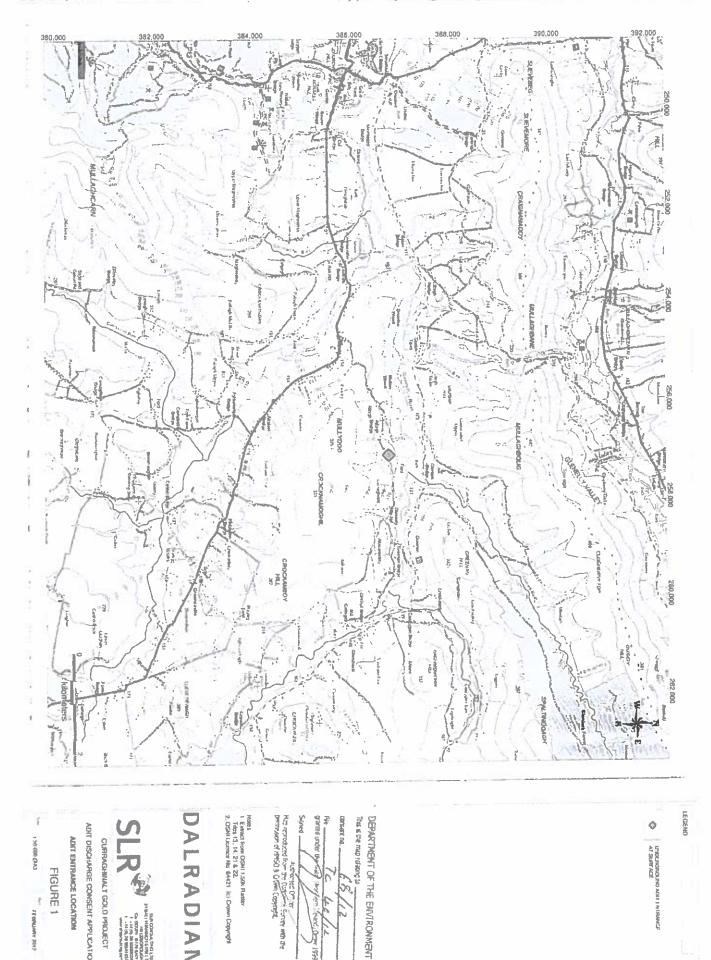
INFORMATIVE

This discharge consent may be reviewed at any time, if the area of discharge or any area downstream, has been, or becomes designated under the European Communities Nature Conservation (Natural Habitats etc) Regulations (Northern Ireland) 1995 or the consent conditions do not meet the requirements of any other European Community Directive.

Dated this 2 day of July 2012

Northern Ireland Environment Agency Water Management Unit 17 Antrim Road Lisburn Co Antrim BT28 3AL





This is the map refacing to

DALRADIAN

Notes .

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1 Enfant from OSNI 1 50k Flactor

1 Exp 13, 14, 21 & 22.

2. OSNI Licenze No. 64421 kid Crown Copyright AUDITORISE OF THE PROPERTY AND THE PROPE

FIGURE 1

ADIT DISCHARGE CONSENT APPLICATION ADIT ENTRANCE LOCATION

CURRAGHINALT GOLD PROJECT

CHICAMATABLE



30th May 2013

Discharge Consents, Water Management Unit, Northern Ireland Environment Agency, 17 Antrim Road, Lisburn, BT28 3AL

Our Ref: 130502.501.0241.002.02.L.Rev02.Exploration Tunnel Extension Discharge

Consent Cover Letter

Dear Mr.

RE: WATER (NORTHERN IRELAND) ORDER 1999: DISCHARGE CONSENT APPLICATION -- EXTENSION OF THE EXISTING UNDERGROUND TUNNEL FOR MINERAL EXPLORATION, AT CURRAGHINALT, GORTIN, CO. TYRONE.

Please find enclosed a completed application form and supporting documentation for a Water Order consent relating to the discharge of treated site drainage from the extension of the existing exploration tunnel, and surface facilities, including waste rock storage, at Curraghinalt, Gortin, Co. Tyrone.

The necessary works required for the extension of the existing exploration tunnel are for mineral exploration purposes only, and will be undertaken by Dalradian Gold Ltd. (DGL).

1.0 BACKGROUND

DGL is a wholly-owned subsidiary of Dalradian Resources Inc, a Toronto Stock Exchange-listed Canadian mineral exploration company with headquarters in Toronto, Canada, and with offices in Belfast, Omagh, and Gortin, Northern Ireland. The company also has several exploration projects in Norway.

DGL's flagship project is the gold deposit at Curraghinalt, Co. Tyrone. Mineral exploration work at Curraghinalt has been undertaken since 1983. The work done to date had resulted in the identification of up to 10 primary gold-bearing veins, which are up to 3.0 meters in width. Historical and ongoing regional exploration drilling, geochemical testing, geological mapping and sampling work suggests that additional gold-bearing veins may exist within DGL's prospecting areas. Although exploration work at Curraghinalt has been ongoing since the early 1980's, DGL's exploration programmed only commenced in 2012, shortly after DGL purchased the project in late 2009.

2.0 PERMITS AND LICENSES

DGL has carried out the above-noted exploration subject to Mineral Prospecting Licences DG1/08 DG2/08, DG3/11 and DG4/11, which were issued to DGL by the Department of Enterprise, Trade and Investment (DETI). Moreover, DGL performs mineral exploration



work subject to Part 16 of the Planning (General Development) Order NI 1993, which relates to permitted development rights for mineral exploration works.

DGL also has a Discharge Consent (Ref 68/12) for site drainage associated with underground exploration drilling in the existing exploration tunnel. The Northern Environmental Agency (NIEA) issued Discharge Consent (Ref 68/12) to DGL in July, 2012. However, due to changes in the exploration/work programme, DGL has not yet undertaken any underground exploration drilling in the above-noted exploration tunnel.

The application included herein relates to proposed exploration work within licence area DG1/08 at Curraghinalt. Specifically, it related to DGL's proposed programme of underground exploration through the extension of the existing exploration tunnel, as described in the following chapters. Given the nature and duration of these proposed works, Part 16 Permitted Development rights for mineral exploration works do not apply and DGL will need to obtain authorization to proceed with the project from the Department of the Environment's (DoE) Strategic Planning Services. As such, DGL submitted a planning application for the exploration tunnel extension to the DoE Strategic Planning Division on the 18th February, 2013. The planning application is currently under consideration by DoE Strategic Planning Division (Planning Ref. No. K/2013/0072/F), and a complete detailed project description is available in the application, a copy of which the NIEA have.

This Water Order discharge consent application is being submitted to DoE NIEA in parallel with the above-noted planning application, which was submitted to the DoE Strategic Planning Division.

3.0 EXPLORATION TUNNEL EXTENSION - DESCRIPTION OF ACTIVITY

The proposed project will allow DGL to extend the existing exploration tunnel by 2,000 linear metres to obtain and remove bulk samples of mineralised rock. The proposed activities will enable DGL to:

- Confirm the grade and tonnage and continuity of the mineralised (gold bearing) veins.
- · Evaluate underground geotechnical and hydrogeological conditions.
- Carry out offsite metallurgical testing.
- Evaluate the technical and economic feasibility of, and trial various mining methods for, extracting the mineral.

The majority of the proposed works will be performed underground, and will be undertaken using industry standard rock excavation methods. Temporary works will be undertaken above-ground on fields adjacent to the existing tunnel entrance, and on a limited number of surface locations above the underground workings. The proposed surface works required for the exploration tunnel extension will be undertaken on lands, which DGL controls.

The proposed works will comprise three phases:

- Phase 1: Site Set-Up: The initial transportation of equipment and set up of the site compound area, installation and commissioning of the water management system at the site, upgrading of existing access, erection of portacabins, construction of waste rock storage area etc.
- Phase 2: Exploration Tunneling: The activities involved include underground exploration drilling, extending the existing exploration tunnels, including the blasting and subsequent removal of waste rock and mineralised rock (bulk samples) and

Curraghinalt Gold Project, Co. Tyrone.

Mineral Exploration: Tunnel Extension -Discharge Consent Application

removal of the bulk samples off-site as well as detailed mapping and exploration tunnel side wall channel sampling.

Phase 3: Demobilisation and Closure / Restoration Phase: The movement of mining
equipment off site and related decommissioning works together with associated
restoration of the surface works area. The water management and treatment system
will be the final piece of infrastructure removed from the site, once all other
demobilization and restoration works are complete.

The bulk, mineral samples obtained from the exploration activities described herein will be stored temporarily onsite, in a covered dry facility before being transported off-site analysis. Once off-site, the bulk samples will be stored in a suitable area awaiting onward shipment either by truck or ship, to a processing facility outside of Northern Ireland.

In addition to the activities described in this cover letter, DGL will continue to carrying out surface exploration drilling activities at Curraghinalt and other licensed areas. This Water Order discharge consent application applies to the treatment and discharge of effluent associated with these surface drilling and related activities, as well as discharges from the exploration tunnel extension and underground exploration drilling and related activities, as described below. DGL have developed a Method Statement for Drill Site Water Management and a copy of this statement is included with this consent application.

3.1 Key Features of the Proposed Works

The proposed works will include the following features:

- The extension of the existing exploration workings by approximately 2,000 linear meters, with new additional headings along the mineralised zones, using industry standard drill and blast operations. By its nature, mineral exploration is an iterative process, and evolves as the work progresses.
- The extraction of approximately 20,000 cubic meters (m³) of material (in-situ volume) from the extended exploration tunnel, comprising mineralised rock and waste rock. The mineralised rock (approximately 14,100 m³ in-situ volume) will constitute bulk samples to be used for additional metallurgical testing, and will be stored temporarily onsite. The remaining waste rock will be stored on site and will not be removed off site.
- The erection of temporary works around the existing portal including construction of workshop, storage sheds, office and welfare facilities.
- The creation of a surface on-site waste rock storage area.
- The construction of a temporary settlement/attenuation pond, hydrocarbon interceptor and treatment system for to treat drainage water prior to treated water being discharged off site. Such discharge would be subject to a separate Water Order (Discharge) consent from the Northern Ireland Environment Agency (NIEA).
- The placement of a temporary surface explosives store.
- Underground exploration drilling, which will take place from existing and proposed underground workings.

4.0 WATER MANAGEMENT AND TREATMENT SYSTEM

Baseline studies on surface water quality and stream/river flow have been carried out in the Curraghinalt Burn and the Owenkillew River. The Owenkillew River is a designated Special Area of Conservation (SAC) and Area of Special Scientific Interest (ASSI).

501.00241.002.02.Rev02 May 2013

A project-specific water management and treatment system has been designed by Environ EC Canada Inc. (Environ), see enclosed Environ report. The water management plan has been developed, and a treatment system has been designed, to treat drainage from the site prior to its discharge to the Curraghinalt Burn, which then flows into the Owenkillew River. The water management plan is based on a site water balance which has been carried out for the proposed project tunnel extension project, including the underground and surface development.

The water management plan and treatment system has been design and developed with the objective of ensuring surface water quality objectives are met at the point of discharge to the Curraghinalt Burn.

The site water management concepts described in the Environ report incorporate considerations associated with:

- Collecting, storing, and treating surface water run-off from the 100 year / one-hour storm event plus two consecutive 50 year / 15-minute storm events;
- Developing a treatment system that will reliably achieve the anticipated effluent discharge criteria for collected storm event run-off and for other water from exploratory activities and
- Providing dynamic range in the treatment system (turn-up and turn-down) to enable efficient management of stored water to consistently provide appropriate available buffer storage capacity.

Candidate options for treatment of the individual water sources at the site were assessed based on individual water source characterization data obtained during 2011-2012.

The individual water sources at the site are expected to contain different compounds and, therefore, require different unit operations for treatment. The water management concept includes the merging of individual water sources according to treatment requirements:

- A general treatment would combine exploration tunnel water, surface and underground drill return water, and site compound area run-off in a single, comingled water for removal of suspended solids and hydrocarbons.
- Acid Rock Drainage (ARD) collected from waste rock and mineralized rock would be combined with run-off from the active portion of the waste rock storage area for treatment to remove suspended solids and metals, as appropriate.
- Both general treatment and ARD waters would then be co-mingled for removal
 of nitrates and subsequent pH adjustment, as appropriate, prior to discharge.

On-site settling ponds will be designed with sufficient capacity to contain run-off from the exploration tunnel, surface drilling water, and surface water run-off volumes from the 100 year / one-hour storm plus two consecutive 50 year / 15-minute storms (per the Flood Estimation Handbook, 1999) with an attenuation capacity of c. 877 m³.

The discharge of water from the site will be managed and will be at a rate of 9.75 l/s (842 m³/day) for the wettest month. The water will be pumped from the settlement pond to the water treatment plant at a rate of 9.75 l/s, this is the maximum rate. Run-off from storm flow events will be attenuated in the settlement pond prior to treatment off site.

The baseline monitoring results indicate that the exploration tunnel drainage water will not require heavy metals treatment given that heavy metals are not present in concentrations large enough to influence the surface water quality in the Curraghinalt Burn and Owenkillew River. Mass Balance calculations for the discharge and receiving waters indicate that metal removal is not required.

It is anticipated that hydrocarbons, solids and nitrates from blasting may be present in the tunnel drainage. The exploration tunnel water will be blended with other sources of runoff from the site, which have similar characteristics, for the purpose of treatment.

The proposed water management and treatment system includes provision for a hydrocarbon interceptor to remove hydrocarbons from the treated waters prior to discharge off-site.

An effluent monitoring station will enable continuous monitoring of discharge flow rate and the collection of samples for assessing performance of the treatment system in terms of discharge quality. DGL will also collect surface water samples, for subsequent chemical analyses at a duly-accredited laboratory, along the Curraghinalt Burn, the final discharge point, and upstream and downstream of the Owenkillew River (receiving water). The Environmental Monitoring Plan (SLR, February 2013) for the project specifies the surface water monitoring locations, monitoring frequency and key parameters to monitor.

Contingencies to respond to unlikely events that could lead to the temporary shutdowns of the wastewater treatment system (e.g., due to mechanical equipment failure) have been included in the treatment system and are described in the attached Environ Report.

The wastewater treatment system will ensure effluent from the proposed project receives the required level of treatment for achieving compliance with the water quality objectives before being discharged. Moreover, the treatment system will be equipped with instrumentation that will automatically monitor and control key aspects of the treatment system operation.

With the implementation of the proposed water management plan, and treatment system described above, and detailed in the attached Environ report, it is expected that impacts on surface water quality or flow associated with the project exploration activities will not be significant on the Owenkillew River SAC & ASSI.

5.0 WATER MANAGEMENT AND TREATMENT - PROJECT TIME FRAME

A planning application was submitted to the DOE Strategic Planning Division on the 18th February for the proposed exploration tunnel extension. Subject to obtaining the relevant licencing for the project the indicative timescales for Phases 1, 2 and 3 are set out here:

- Phase 1 Site setup including water management system, duration is 3-4 months.
 Indicative time frame is October 2013 to January 2014.
- Phase 2 Exploration Tunneling, duration is 8-12 months.
 Indicative time frame is January 2014 to December 2014.
- Phase 3- De mobilisation and site closure/restoration, duration is 3-6 months
 Indicative time frame is January 2015 to July 2015.

The discharge consent will be temporary in nature, during the lifetime of the proposed project (Phases 1 to 3). DGL are seeking a consent to discharge treated water from DGL's activities to run from October 2013 through to May 2015. The water management and treatment system will be in place throughout the three phases of the proposed project, to ensure no adverse impact on the receiving environment from the discharge of water to the Curraghinalt Bum.

501.00241.002.02.Rev02 May 2013

6.0 SCREENING REPORT FOR HABITAT REGULATIONS ASSESSMENT

SLR prepared a screening report assessment containing relevant supporting information relating to the ecology (flora and fauna). The screening report was submitted with the planning application to the DoE Strategic Planning Division, in support of the proposed exploration tunnel extension, in order to allow the NIEA to undertake a Habitats Regulations Assessment (HRA).

The screening report assessment has considered the potential effects associated with the discharge of effluent required as part of the proposed exploration works at Curraghinalt, Co. Tyrone on the Owenkillew River SAC.

The assessment concluded that the project is not likely to have an adverse effect on the integrity of the Owenkillew River SAC, or on any of the qualifying habitats or species for which this has been designated and in light of the conservation objectives for this site or features, either as a stand-alone project or in-combination with other plans or projects.

It is considered that the HRA document provides sufficient relevant information to allow Competent Authority, in this NIEA, to reach a determination as that the proposed development is not likely to have any significant impacts on the integrity of the Owenkillew River SAC, under Article 6 of the Habitats Directive (92/43/EEC).

A copy of the screening report assessment and supporting information is submitted here with this consent application, in order to allow the NIEA to undertake a Habitats Regulations Assessment, for the proposed discharge consent associated with the exploration tunnel extension.

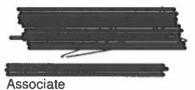
7.0 APPLICATION DOCUMENTATION

Further to this covering letter, this application for consent to discharge is accompanied by:

- Cheque for application fee- £118 (Site Drainage).
- A completed application form (Main Application Form W01).
- A completed application form for trade effluent discharges (Application Form W01 -Annex 2).
- Site location plan (1:50,00) Figure 1.
- Site layout plan (1:5,000) Figure 2.
- Surface working area (1:1,000) Figure 3.
- Detailed site layout plan for the adit entrance area (1:500) Figure 4.
- Proposed Water Treatment System (Environ) Figure 5.
- Proposed Water Management and Treatment System Report (Environ).
- Habitat Regulations Assessment Report and screening letter.

Further to the pre-application consultation meeting at DGL's offices in Belfast on the 17/04/2013, and presentations regarding the proposed exploration tunnel extension and water management and treatment system, we trust the enclosed information enables you and your colleagues to process this application and issue a discharge consent for the proposed surface and underground mineral exploration activities described herein in a timely manner.

Yours sincerely SLR Consulting Limited



Associate

cc. (Dalradian Gold Ltd).

Enc.

- i. Cheque for fee £118 (Site Drainage)
- ii. Application form for new consent to discharge (Main Application Form W01);
- iii. W01-Annex 2 (Trade Effluent Discharges Site Drainage);
- iv. Figures 1 to 5;
- v. Water Management and Treatment Report Environ EC (Canada) Inc.;
- vi. Information to Inform a Habitat regulations Assessment; and
- vii. DGL Drill Site Water Management : Method Statement (April 2013)

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