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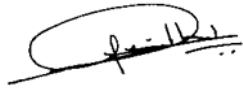
From Wexford County Council

for the extension of an existing sandpit at

Ballinrooan, Screen, Co. Wexford.

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Document Title	Annual update on progress and management of restoration works at the MSK Silversands Ltd. Sandpit, Ballinrooan, Screen, Co. Wexford.		
Date Released	9 th of February 2018		
Author	EurGeol Bruno Teillard, PGeo M.Sc. Hydrogeology		
Signed on behalf of Aqua Geoservices		Signed on behalf of the client*	

* Where it is a requirement that this report be issued to a regulatory or other authority, then the client should sign the appropriate place in the above table and, unless specifically agreed in writing to the contrary, forward copies to the appropriate authority (e.g. EPA etc.)

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I INTRODUCTION

Mr. Sean Kelly & Mr. Michael Kelly have applied to Wexford County Council for planning permission (Planning File No. 20171532) to extend the existing sandpit at Ballinrooaun, Screen, County Wexford (Planning permission No. 20082323) onto adjoining lands. An Environmental Impact Assessment (EIA) was submitted in 2017 in support of the application. Aqua Geoservices Ltd. (AGS) were requested by MSK Silversands Ltd. (MSK) to respond to items 9 and 11 of the request for further information from Wexford County Council (dated 24/01/2018).

II. RESPONSE TO ITEM 9

Item 9. “It is noted that a sprinkler system is to be installed for dust suppression during periods of drought. It is noted that this water supply is in fact from a well water supply at the farm and therefore groundwater abstraction is required. Based on the existing operation, the applicant is requested to provide further detail and estimation on the approximate volumes of water to be used in dust suppressions measures and the impact this may have on the groundwater and well yield at such times of drought”.

It is proposed to use a wet pipe sprinkler system in order to:

- 1 Extend the coverage fully cover the slopes of the proposed sandpit extension facing prevailing winds;
- 2 Adjust the spray pattern manually o only wet the sandpit area and conserve water
- 3 Widen the radius of influence by using long range water sprinklers (i.e. 20m spray range);

Assuming:

- an average flow rate of 8.0l/s for a sprinkler capable of delivering a 20m spraying range;
- a “head to head”¹ spacing of 20m to ensure that the spray from one sprinkler location;
- a worst-case scenario, i.e. when the sandpit is at its maximum extension;

A total of up to 16 sprinklers would be used to cover a perimeter of up to c. 310m to face the prevailing winds. This would equate to a water demand of 7.68m³/hr.

By comparison, the current set up for the existing sandpit operation² requires the use of a 9.1m³ water bowser up to twice a day (i.e. 1 hour in the morning and one hour in the afternoon) during dry periods to wet the flanks of the sandpit.

The water bowser will be replenished at night and topped up during the day when necessary. There has never been any shortage of water in the proposed supply well to date³ and given that the proposed setup will result in the conservation of water, there shall be no further risk of dewatering of this latter well.

¹ i.e. when the spray from one sprinkler reach the other sprinkler location.

² Source: Mr. Michael Kelly, MSK.

³ Source: Mr. Michael Kelly, MSK.

III. RESPONSE TO ITEM 11

Item 11. “Please clarify under Section 8.6.5 of the EIAR the high winter table is stated as being 29AOD and 38 AOD and the proposed sandpit floor is stated as being 38m AOD. However, there should remain a minimum of 5m above the high water table at all times. Also in the Planning report specifies that the quarry is to be quarried to 40m AOD at its lowest point. Submit clarification on this statement and revised section drawings showing the quarry floor a minimum of 43mAOD and/or 5m above the high winter water table”.

In response to item 11, please note that the elevation of the high winter water table varies across the proposed sandpit extension area from c. 38m AOD to the south eastern corner of the site down to c. 29m AOD to its south-western part. The areas where the water table will be at its highest also correspond to areas where a buffer zone will be implemented and where the slopes of the sandpit operation will be located over the lifespan of the sandpit operation, hence these areas will remain well above the proposed finished floor level (Cf. Figure 1). As a result and based on the high water table information available to date, the minimum requirements for a 5m buffer between the proposed sandpit floor and the high winter water table will be kept at all times.

To further illustrate this, please refer to AGEC drawings No. 7.3 to 7.4 (revision 1, dated 09/02/18), which show cross sections of the proposed sandpit area for different phases of extraction with the interpreted groundwater levels (i.e. high winter table level).

IV. REFERENCES AND SOURCES OF INFORMATION

- 1 AGEC drawings No. 7.3 to 7.4 rev.1 (dated 09/02/18).

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FIGURES

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