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Report: Blast Impact Assessment at New bulk sampling, sorting, and testing facility Stage II expansion at Afritin Mine, Uis on ML 134 Project		
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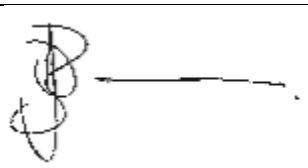
Document Authorised:	JD Zeeman	

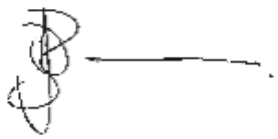
i. Document Prepared and Authorised by:

JD Zeeman
Blast Management & Consulting (2015/061002/07)
61 Sovereign Drive
Route 21 Corporate Park
Irene
South Africa

PO Box 61538
Pierre van Ryneveld
Centurion
0045

Cell: +27 82 854 2725 Tel: +27 (0)12 345 1445 Fax: +27 (0)12 345 1443

ii. Document Control:

Name & Company	Responsibility	Action	Date	Signature
JD Zeeman Blast Management & Consulting	Consultant	Addendum to EIA Report	07/09/2022	

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1 Introduction

Additional infrastructure at AfriTin Mining Limited ("AfriTin") was evaluated for possible impact. The additional infrastructure consists of a bulk sampling, sorting, and testing facility. The planned new infrastructure was placed on plan and reviewed if blasting could have influence.
The location of new infrastructure is illustrated in Figure 1.

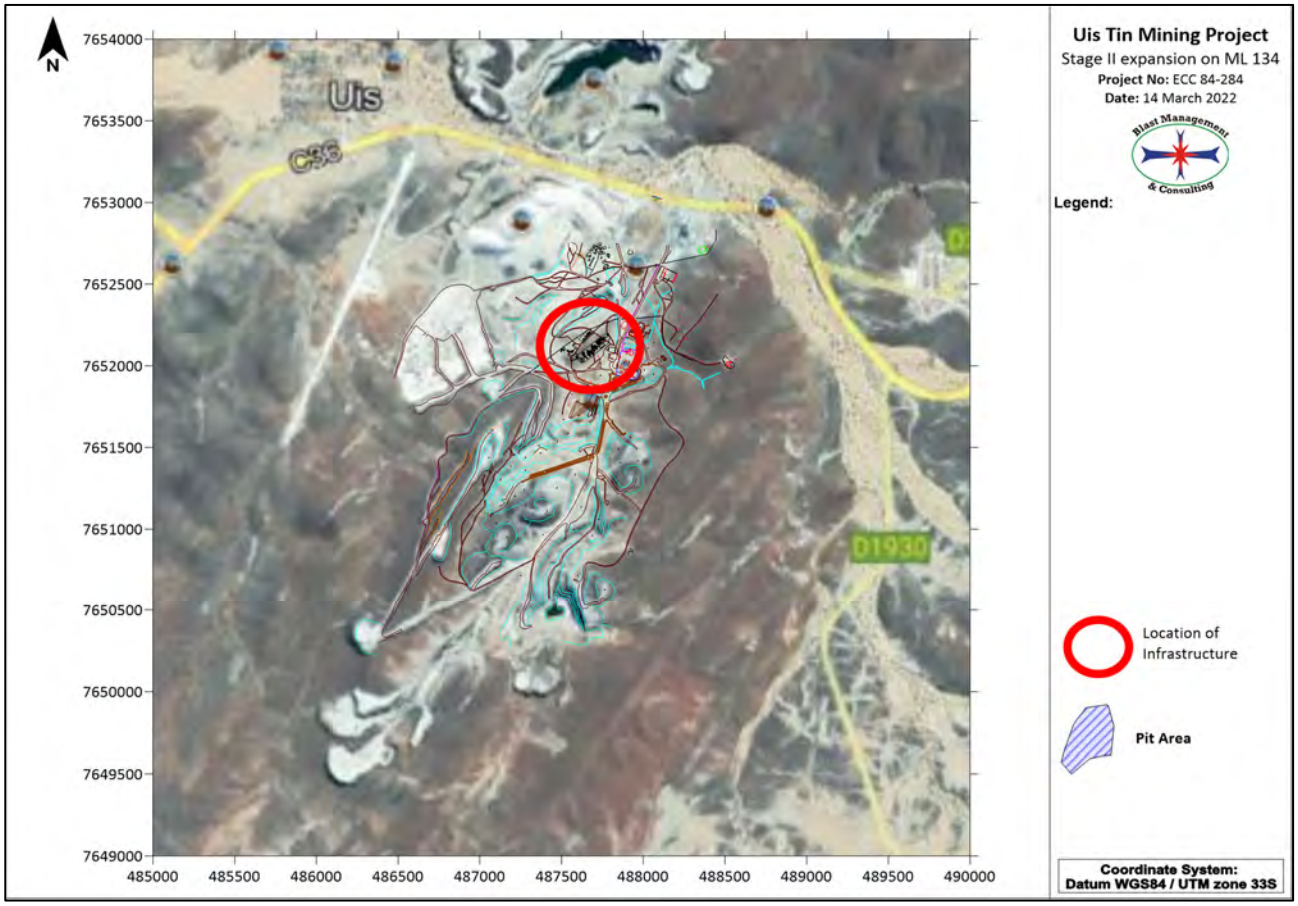

Figure 1: Location of new infrastructure

Figure 2 shows zoomed area of the infrastructure.

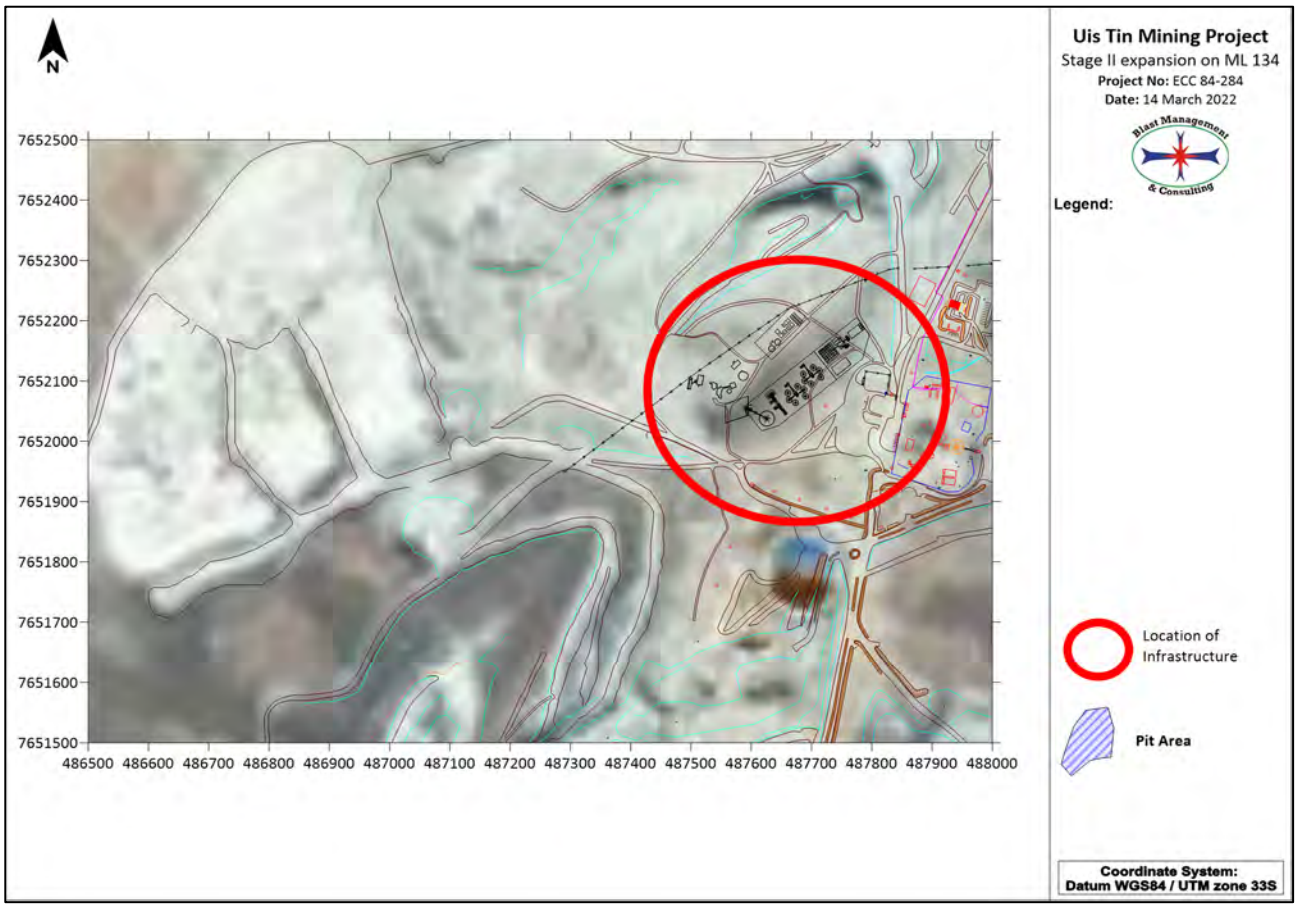

Figure 2: Zoomed area of infrastructure

2 Impact Evaluation

2.1 Ground Vibration:

Review of the location of the new infrastructure from the pit area it is expected that ground vibration levels from maximum charge is in the order of 12.5 mm/s.

These levels are well within accepted norms for this type of infrastructure. No negative influence is expected from ground vibration due to blasting operations. It must be noted that blasting operations further away from the new infrastructure will yield lower levels at this plant.

The following figure shows the modelled ground vibration levels in relation to the new plant.

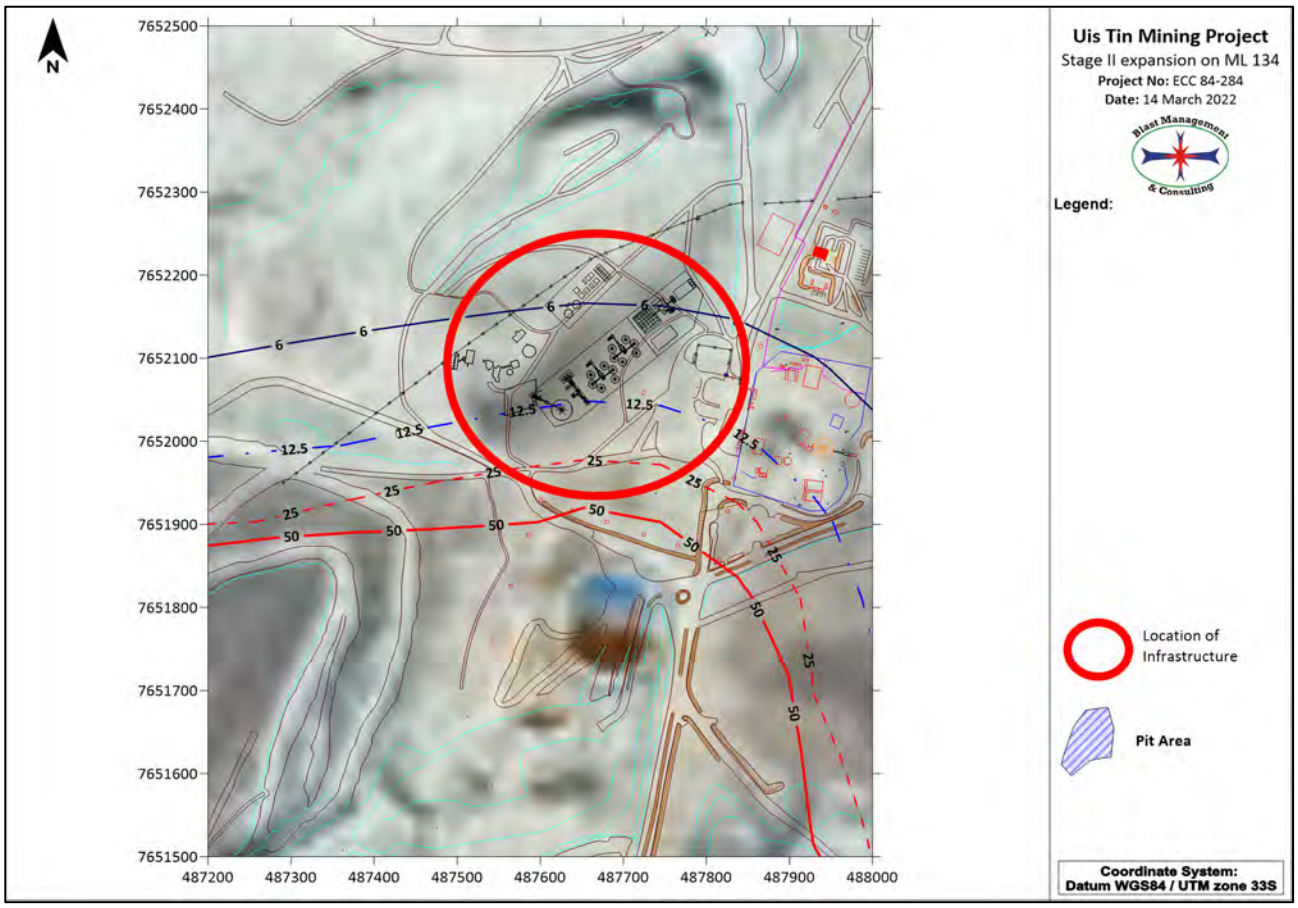

Figure 3: Ground Vibration levels

2.2 Air blast:

Air blast was not considered. Air blast is not expected to have any influence on this type of plant.

2.3 Fly Rock:

The expected fly rock range is 388 m. The new infrastructure is located within this range at 214 m. The plant will be within range of possible fly rock when blasting is done in this northern section of the mine. Adjustments can be made to the stemming lengths and blast hole diameters to ensure better control on fly rock. The following figure shows the location of the plant in relation with the pit area and fly rock range indicated.

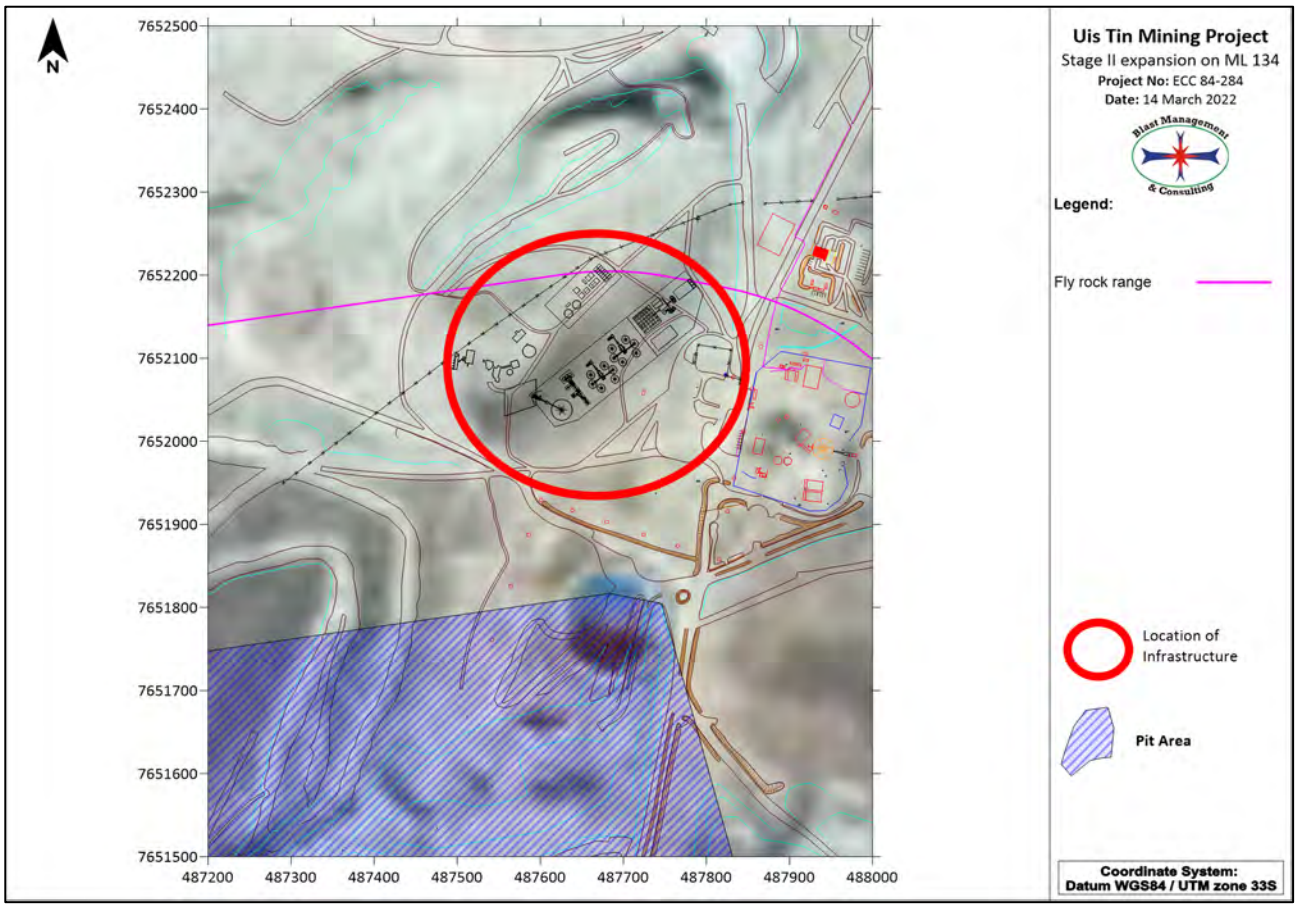

Figure 4: Fly rock range

3 Conclusion

The planned new plant (bulk sampling, sorting, and testing facility) was evaluated for possible influence from blasting operations with regards to ground vibration, air blast and fly rock. Ground vibration expected at the plant is well within limits with no specific negative influence expected. Air blast does not have any significant influence of these type of structures. The location of the plant is within range from possible fly rock. Blasting in the northern section of the mine will require some mitigation or changes to blast designs to ensure damage is not induced to the plant.

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