

Scherzic

Ground Investigations

Report 7201C(2)
September 25, 2018

EPA Tasmania

Department of Primary Industries, Parks, Water and
Environment

Attention: **Mary Gibbs**

Environmental Officer (Assessments)

Re; **Fragrance Tas -Hobart (Elizabeth) Pty Ltd**

234-250 Elizabeth Street, Hobart

We refer to the Scherzic Geotechnical Investigation Report Job 7201B, dated 29 September 2017 for the above development.

- Calculations of the basement in situ volume excavation for the above project have been estimated as 20,180m³.
- Our report details the subsurface materials which range from Filling (Gravel, Sands, Bricks) overlying natural Clays/ Extremely Weathered Rock, overlying Highly Weathered to Slightly Weathered Sandstone/Mudstone which is highly jointed. (Descriptions are given in AS1726).
- It is estimated more than 60% of material to be excavated in the basement works will consist of the Fill and Clay/XW Rock soils. Based on our estimated densities, which range from 19 - 23kN/m³, we calculate the **total in situ excavated material mass will be 48,610 tonne** (427,820kN).
- We estimate a bulking factor in the order of 1.2 to 1.6m should be adopted for the basement materials at this site. These equates to loose volumes of between 24,000 and **33,000m³ of loose material to be transported**.
- We estimate with a 6m³ truck with 4m³ doggy trailer, the number of trips to remove the soil will be between 2400 and 3300.
- The time taken to remove all the spoil will be dependent upon the disposal distance and the number of trucks & excavators adopted for the bulk excavations. The time for a return trip could be any-where between 1hour and 3hours. For this project a maximum 112 truck movements per day is proposed. A calculation of anticipated time for excavation by a local contractor who has extensive experience excavating both rock and soils in Tasmania is given below:

m3 solid	20,180
solid bank per load	6
No of excavators	2
loads per hour per excavator	7
Hours per day	8
truck loads/movements per day	112
bank m3 per day	672
No of days	30.0297

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Hence a rounded number of 30 days minimum will be required to excavate the basement at this site however as discussed above, the excavation can be achieved using differing truck and excavator numbers and undertaken in one stage or in several stages. **A realistic figure of 40 days is anticipated to excavate the basement at this site.**

Please contact the undersigned for further information or clarification

Sincerely,



Martin Schult, BEng., MEngSc., GradDipGeoSc., MIE(Aust)., CPEng., NER (National Engineers Register), Building Practitioner CC6587
Principal Geotechnical Engineer