



Council Agenda - 3 September 2020 - Agenda Item 9.1 - Attachment 3d  
Site Contamination and Environmental Risk Review  
2-4 Invermay Road Invermay



Measured form and function

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# Report

## Inveresk Showgrounds Redevelopment

### Site Contamination and Environmental Risk Review



**PLANNING EXHIBITED DOCUMENTS**  
 Ref. No: DA 0241/2020  
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**INVERESK SHOWGROUNDS SITE CONTAMINATION**

<b>Issue</b>	03
<b>Date</b>	May 6 <sup>th</sup> 2020
<b>Project Number</b>	19.297
<b>Project Name</b>	Site Contamination Review – Inveresk Showgrounds Site, Forster Street
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# 1. INTRODUCTION

The Launceston Show component of the Inveresk site is located on the southern side of Forster Street in Invermay. The site forms the northernmost section of the Inveresk precinct which was formerly used as the Inveresk Railyards and as a concrete batching plant, prior to being rehabilitated for use as the Inveresk Showgrounds in 1998.

An extensive site investigation and environmental audit of the site was commissioned by Launceston City Council in 1992.

The subject of this report is a summary of the results of those reports and their relevance to the proposed redevelopment of the showgrounds site as a car park.

## 2. SITE INVESTIGATIONS

The Launceston Council commissioned an exhaustive series of reports in 1992 onwards which investigated the potential contamination for the entire site.

The initial series of reports were:

- Environmental Audit Volume 1 – Site History – Dames & Moore 1992.
- Environmental Audit Volume 2 – Work Plan – Dames & Moore 1992
- Environmental Audit Volume 3 – Preliminary Contamination History – Dames & Moore 1992

A further site investigation was then carried out and reported on in:

- Factual Report on Contamination Assessment – Douglas and Partners P/L March 1993.

These were then followed by two further reports:

- Volume 1 – Report and Appendices – Health and Risk Assessment – ICF P/L June 1993.
- Volume 2 – Figures & Tables – Health and Risk Assessment – ICF P/L June 1993.

**3. SITE SAMPLE SITES**

The site investigations in 1992 and 1993 had a number of test pits and bore holes relevant to the Showground site, as shown in the following images:

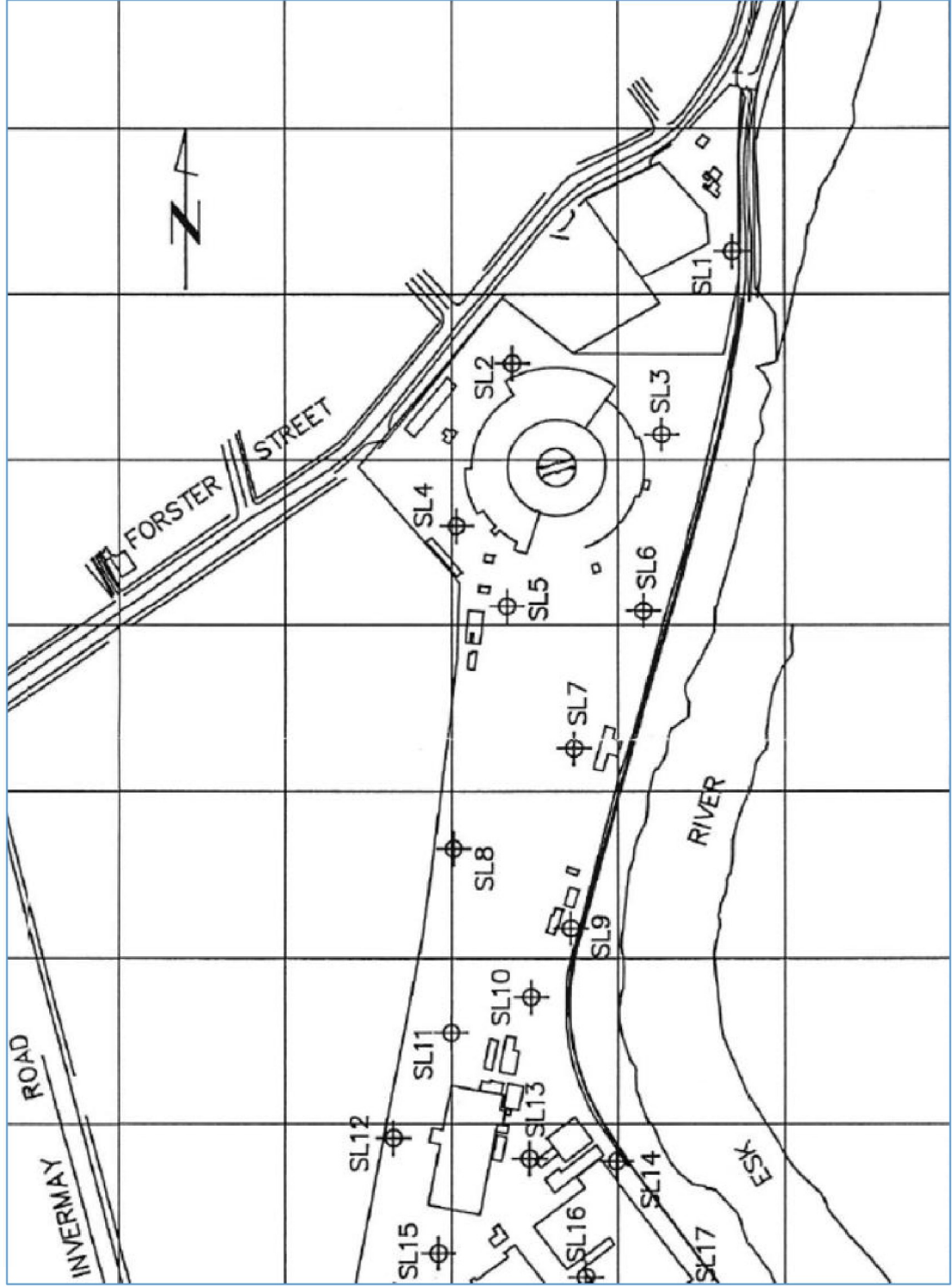


Image 1 – 1992 Dames and Moore sample sites.

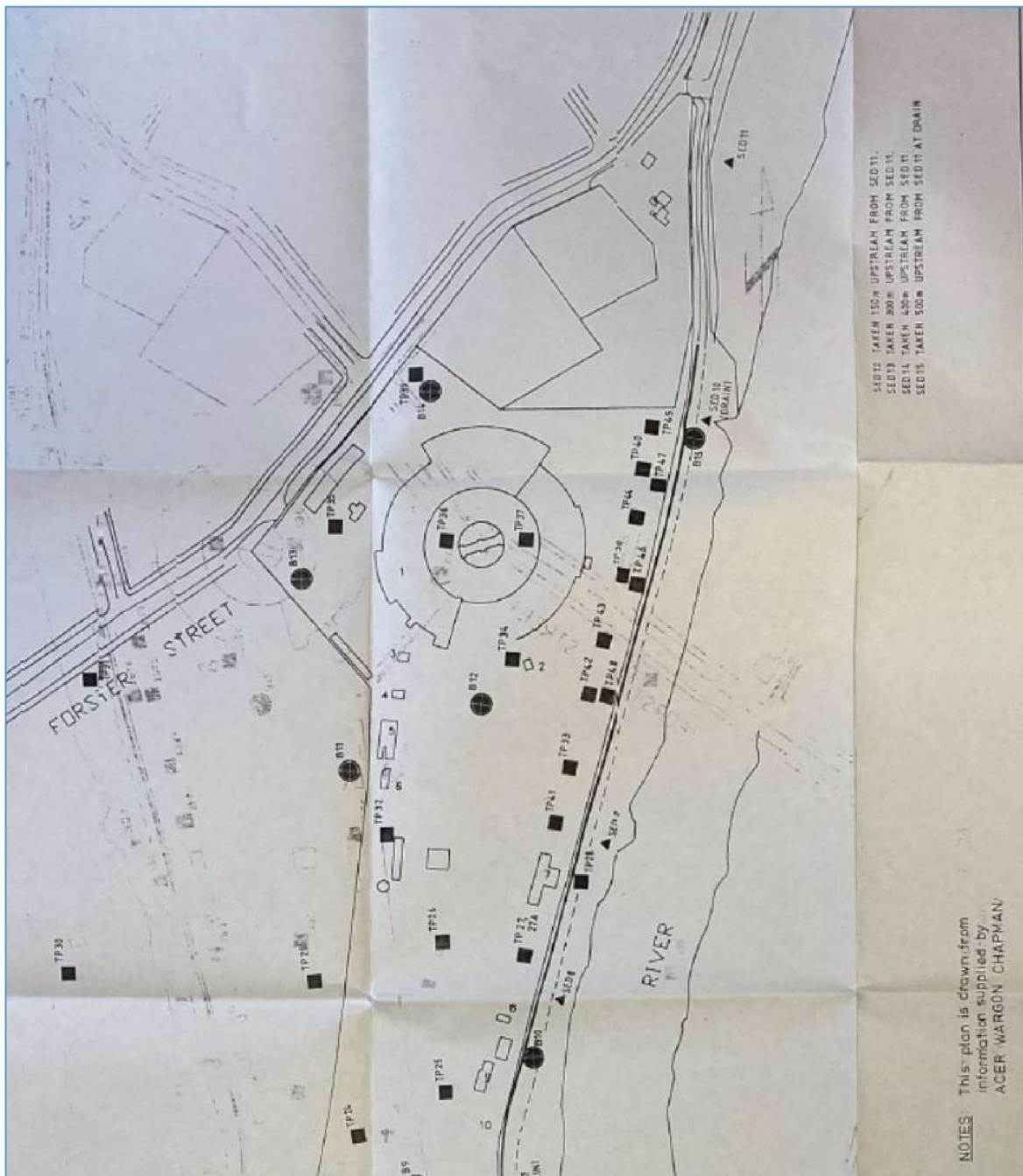


Image 2 – 1993 Douglas & Partners sample sites.

It can be seen from the studies that the Showgrounds site had 6 sampling locations (SL 1 – SL6) for the 1992 investigation and 17 sampling locations (TP 34-40, TP 42-48, BH 12-15) in the 1993 investigation.

The majority of these locations were in the area of the former railyards and roundhouse rather than in the former concrete plant located on the northern extremity of the site.

#### 4. SUMMARY OF SAMPLE RESULTS

The test pits and boreholes indicated that much of the site has been filled with imported materials to raise levels above that of the original estuarine wetland. The fill material contains building rubble, coal, ash, sand and train parts. The primary contaminants for the northern section of the site were heavy metals (copper, lead and zinc) with polycyclic aromatic hydrocarbons found in trace amounts as sown on the following extract:

**Table 5-3  
 Summary of Soil Exposure Point Concentrations (mg/Kg)  
 for Heavy Metals and Selected PAHs**

Analyte	Northern		Central		Southern		Total Site	
	Surface	Subsurface	Surface	Subsurface	Surface	Subsurface	Surface	Subsurface
Cu	711	269	297	108	622	344	444	209
Pb	492	179	386	228	4972	2384	2337	846
Zn	519	760	340	1156	2603	1304	1314	847
As	5	-	21	* 12	11	-	12	47
Cd	1.8	-	1	* 10	7	-	4	10
Cr	24	-	51	* 42	54	-	40	42
Ni	74	-	66	-	75	-	55	-
Hg	0.6	-	1	-	0.2	-	0.5	-
Sb	12	-	10	* 25	30	-	17	25
Sn	52	-	22	* 44	26	-	23	44
BAP	0.28	0.25	0.29	0.25	0.48	0.27	0.33	0.28
DBA	0.25	0.25	0.21	0.25	0.31	0.37	0.25	0.30

Note: \* = Indicates maximum detected value used; all other are 95% UCL  
 BAP = Benzo(a)pyrene  
 DBA = Dibenzo(a,h)anthracene

The conclusions from the 1993 report are that the average conditions for the whole of the Inveresk site are unlikely to pose a risk to construction workers although there may be local areas that pose a potential health risk if found. The sampling results are that the northern precinct of the site has less contaminants than the site as a whole.

The site development since 1993 has been the removal of debris from the original rail shunting yard, the placement of car park pavements and topsoil, and the construction of the Showgrounds buildings. The effect of this, when combined with the installation of a stormwater drainage system, has been to isolate buried contaminates.

## 5. THE LAUNCESTON INTERIM PLANNING SCHEME

The Potentially Contaminated Land Code of the Launceston Interim Planning Scheme has the following performance requirement:

*P1*

*Excavation does not adversely impact on health and the environment, having regard to:*

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or*
- (b) an environmental site assessment that demonstrates that the level of contamination does not present a risk to human health or the environment; or*
- (c) a plan to manage contamination and associated risk to human health and the environment that includes:
  - (i) an environmental site assessment;*
  - (ii) any specific remediation and protection measures required to be implemented before excavation commences; and*
  - (iii) a statement that the excavation does not adversely impact on human health or the environment.**

The site investigations of 1992 and 1993 indicate that the Showgrounds site is contaminated but the level of contamination does not pose a significant risk to human health or the environment. The proviso is that there may be local areas of contamination on the site that are yet to be located due to the long history of filling over the site.

The civil works required for the site will be the installation of a stormwater system to serve the extended car parking areas and the removal of redundant foundations from the demolished buildings. There will be no significant changes in levels for the site or extensive excavation save that which is required for the installation of underground services.

It is therefore appropriate that a construction risk management plan is implemented that will identify and manage risks from contaminated soil, if these are discovered during the construction process. The likely source of a high-risk contaminant is buried debris found during excavation.



## 6. CONCLUSION

Whilst the 1992 and 1993 reports suggest that the site development proposed will not be a risk to human health or the environment, these reports note the possibility of localised areas of contamination that might be encountered during excavation.

It is recommended that a construction management plan be prepared for the specific site works that will significantly excavate the site (such as trenching). The intent of such a plan is to identify and manage hazards from buried debris as discovered during the excavation process.