

**ENGINEERING SERVICES REPORT  
PROPERTY: 173 ELIZABETH STREET,  
COBURG NORTH**

**CLIENT: COBURG (VICTORIA) PTY LTD**

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**WBCM REF: 3938**

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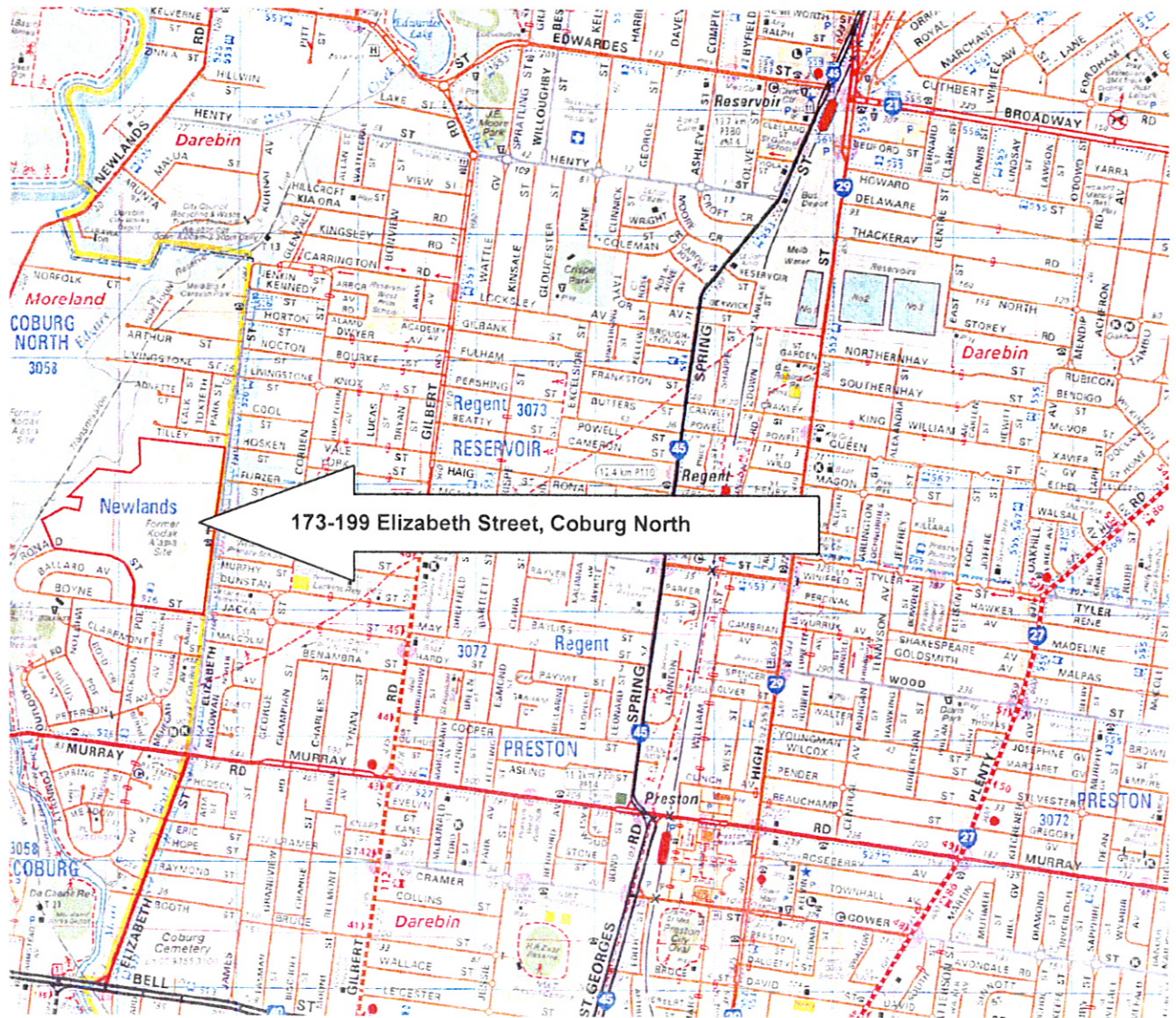
## 1 INTRODUCTION

Coburg (Victoria) Pty Ltd intends to develop the former Kodak site, currently known as 173 Elizabeth Street, Coburg North, into a residential development of some 400 dwellings and minor commercial precinct.

The purpose of this report is to identify the existing services on the site and the responsible authorities, and to provide an assessment of the capacity of the existing infrastructure to facilitate a development of this nature.

## 2 SITE LOCATION

The site is located at 173 – 199 Elizabeth Street, Coburg North, Melway Map 18, references B9.





### 3 EXISTING SERVICES AND CAPACITY

The relevant service authorities have been contacted to obtain details of the location of existing services within and surrounding this site. The authorities contacted include:

- Moreland City Council
- Alinta AE (Electricity)
- Telstra
- Optus Network
- SP-Ausnet
- Tenix Maintenance Services (Gas)
- Yarra Valley Water (Sewer, Potable Water)
- Melbourne Water (Large Water Main, Edgars Creek)

#### 3.1 DRAINAGE

Melbourne Water Corporation (MWC) is the Responsible Authority for Edgars Creek and the Moreland City Council (MCC) is the Responsible Authority for the minor drainage system that will service the site. Minor drainage works are to be constructed in accordance with current Council standards.

A detailed report has been prepared by Neil M Craigie Pty Ltd titled 'Stormwater Drainage Master plan' (SWDMP), Water Sensitive Urban Design (WSUD) Strategy. This report addresses the applications to this site of the guiding principles of WSUD in achieving integrated water cycle management solutions linked to an ecologically sustainable development focus.

##### 3.1.1 Topography

The 1 in 100 year water levels within Edgars Creek at the northern and southern boundaries of the site as confirmed in the plan provided by MWC are 51.5 and 45.5 AHD respectively. Based on the site contour plan, the existing surface is above the flood line and exceeds the minimum MWC freeboard requirement of 600mm. Refer Appendix A for MWC plan.

Based on the contour information provided by Barker Monahan, the site is divided into two catchments by a ridgeline between the northeast corner of the site at the intersection of Elizabeth and Hosken Streets diagonally towards the eastern bend of Ronald Street, just north of Boyne Street.

The southeast catchment of approximately 9 ha grades towards the low point at the intersection of Elizabeth and Boyne Streets while the north-west catchment of approximately 11.3 ha grades towards a low point at Ronald Street and discharges into Edgars Creek. The average grade of the two catchments is 1 in 30 and 1 in 15 respectively.

In addition a catchment of approximately 0.2ha in Tilley St external to the site currently drains into the site from the north and then into the Edgars Creek catchment.

Refer Appendix B for Catchment plan.

### **3.1.2 General Requirements**

Excavation and clean up of the site has been completed. Previously the site was covered with a large amount of impervious surfaces, which is typical for land zoned industrial. This equates to a high coefficient of runoff compared with a site with pervious surfaces. The area of impervious surface will reduce if the site is developed as a residential area. The coefficient of runoff will therefore be reduced. Consequently, flows to the Elizabeth St and Edgars Creek outlets will be less than for the previous site use. This is confirmed from comparing aerial photographs of the site. WSUD measures including rainwater tanks will contribute to a retardation of flows from the site.

A combination of conventional piped and overland flow system is proposed for the redevelopment of this site together with WSUD measures to satisfy clause 56.

### **3.1.3 Existing Services and Capacity**

Existing Council drainage is located on Elizabeth Street along the eastern boundary of the subject land. Existing drainage line is located along the northern boundary from the Tilley Street to Edgars Creek. There are also five existing drainage outfall points as noted on Existing Services Plan in Appendix C. Subject to detailed design some or all of the existing drainage outlets may be utilised.

#### **Tilley St catchment**

An existing Council drainage pipe connects through from Tilley Street and along the northern boundary and leaves the site at the western boundary to Edgars Creek. It services an external catchment of 0.2ha. Based on the site contour plan it is unlikely that this drain could be utilised to service the development. The existing pipe offset varies from 3m from the site boundary near Tilley St to 0.5m adjacent to Edgars Creek. An easement of 4-2m is proposed over the existing pipes. Refer Appendix D.

Subject to detailed design, additional drainage pits and a pipeline may need to be constructed to cater for the gap flow from the 0.2Ha external catchment in Tilley St. This pipeline could be located adjacent to the existing pipe and could be incorporated into a 4m easement on the west side of the proposed lot. This drainage line would surcharge to the east-west road within the development.

#### **Elizabeth St catchment**

The southeast catchment is to discharge into the existing 675mm diameter drain along Elizabeth Street. This drain connects to an existing 1575mm diameter. MWC main drain at the intersection of Claremont and Elizabeth Streets.

#### **Edgars Creek catchment**

As per Neil Craigie's description there are existing decommissioned drains discharging to Edgars Creek. Subject to detailed design, some or all of the existing drainage outlets may be utilised.

### **3.1.4 Stormwater Drainage Master Plan.**

Refer to Neil Craigie report 'Stormwater Drainage Master Plan'.



### **3.2 SEWER**

Yarra Valley Water is the responsible authority for sewer. Extensive networks of sewer exist abutting the site and cater for the two defined catchments as detailed in section 3.1.1 of this report. Yarra Valley has advised that the existing sewer to the west of the site along Edgars Creek has sufficient capacity for the proposed development, as does the existing sewer in Boyne St. Refer Appendix E.

### **3.3 WATER**

Yarra Valley Water is the authority responsible for providing potable water to the site.

There are water mains in the abutting Elizabeth, Tilley and Ronald Streets. Yarra Valley Water has advised these are of sufficient capacity to connect to this existing system. Refer Appendix E.

The site is also traversed by a large transfer main under the control of Melbourne Water within an existing 12m easement.

This main is soon to be replaced by Melbourne Water and SKM are undertaking the design on their behalf.

### **3.4 POWER**

An Alinta representative has advised that there should be sufficient capacity within the existing system to service the site. Their assessment is based on the previous heavy industry usage being more than the proposed residential development of the site. A street access or an easement will be required to connect the site to the HV/LV in Boyne and Ronald Streets as noted in Appendix F.

### **3.5 TELECOMMUNICATIONS**

Telstra plans show that telecommunication and optic fibre cables exist in the streets abutting the Kodak site. Telstra's optic fibre cables run on the west side of Elizabeth Street and in the past have serviced the original Kodak buildings.

Optus plans indicate that underground optic fibre cables also enter the site from Elizabeth St.

Telstra advised that there is sufficient capacity for telecommunications facilities within the existing network as noted in Appendix H.

### **3.6 GAS**

The site is surrounded by reticulation gas mains in Elizabeth, Boyne and Ronald Streets.

SPAusnet group advise that there is sufficient capacity within the existing system to service the new development. Refer Appendix G

There is also an existing 200 mm diameter high-pressure gas main that traverses the site from east to west within an existing easement. This main is in close proximity to the existing large diameter Melbourne Water water main. SPAusnet has advised that they have no plans to relocate the gas main.