



# Site introduction

Con Gantonas  
Melbourne Water

# Site Characteristics

- Kodak Australasia headquarters from 1961-2004
- Located at 173-199 Elizabeth Street, Coburg North
- 9km north of Melbourne CBD
- 21 hectares in size
- Located in Moreland
- Edgars Creek lies to the west







EDGARS CREEK CONSERVATION ZONE

EDGARS CREEK CONSERVATION ZONE

PROPOSED PEDESTRIAN BRIDGE

PROPOSED VIEWING PLATFORM

PROPOSED EXERCISE STATION

LINEAR RESERVE

STAGE 2

SPECTRUM CREEK SIDE RELEASE

STAGE 2

TOP OF THE HILL RELEASE

STAGE 2

RED BOX RELEASE

STAGE 2

FOCUS RELEASE

WALKING TRAIL

PROPOSED EXERCISE STATION

woolworths

COBURG HILL NEIGHBOURHOOD RETAIL PRECINCT

COMMERCIAL SITESHOPS

NEWLANDS PRIMARY SCHOOL

WALKING & BIKE PATH

PROPOSED MERRIS CREEK TRAIL CONNECTION

EXISTING RESIDENTIAL

CITY 9KMS

indicative only, subject to change.

**Key**  
 Medium Density  
 Future Residential  
 Stage Boundaries

# Background

- Site rezoned in May 2009
- Development plan approved by the Minister for Planning in June 2010 for approximately 400 dwellings and retail
- In 2010 site purchased by the Satterley Property Group
- CPG (now Spiire) engaged by Satterley to undertake engineering services



# Feasibility Process

- Melbourne Water provided comments on the Stormwater Drainage Master Plan
- Spiire keen to work with Melbourne Water to explore innovative WSUD solutions to satisfy stormwater quality treatment requirements in accordance with Clause 56:
  - stormwater quality options off site within the Edgars Creek drainage corridor
  - stormwater reuse at an allotment scale
- Engaging with local community groups



# Melbourne Water Response

- Support for distributed WSUD treatment at a streetscape and allotment scale
- Recommendation for stormwater harvesting
- Waterway health requirements
- Asset protection requirements for water main
- Consultation with Friends of Edgars Creek
- Subsequent submission and approval of MUSIC model



Encumbered Open Space 5904m<sup>2</sup> 2.87%  
Unencumbered Open Space 3765m<sup>2</sup> 1.84%  
Total 4.71%

Complete

About to  
commence

Complete

Plan subject to modification  
and approval





# Moreland City Council Stormwater Quality Targets

Vaughn Grey  
Moreland City Council



# Stormwater Quality Targets

- New stormwater quality targets released in Jan 2012
- Coburg Hill the first new development in the Moreland area under the new targets

AECOM



## Stormwater Targets

Stormwater quality targets for the City of Moreland





# Moreland's waterways

- Moonee Ponds Creek
- Merri Creek
- Merlynston Creek
- Edgars Creeks
- Westbreen Creek



Figure 1 Moreland City Council and its suburbs

# Reduction Targets

Percentage reduction targets:

- 80% reduction in TSS
- 60% reduction in TP
- 45% reduction in TN

Based upon Moreland's 2004 total pollutant load across the council this equates to reductions of:

- TSS: 786 tonnes/year
- TP: 1.2 tonnes/year
- TN: 6.4 tonnes / year

# Design Process

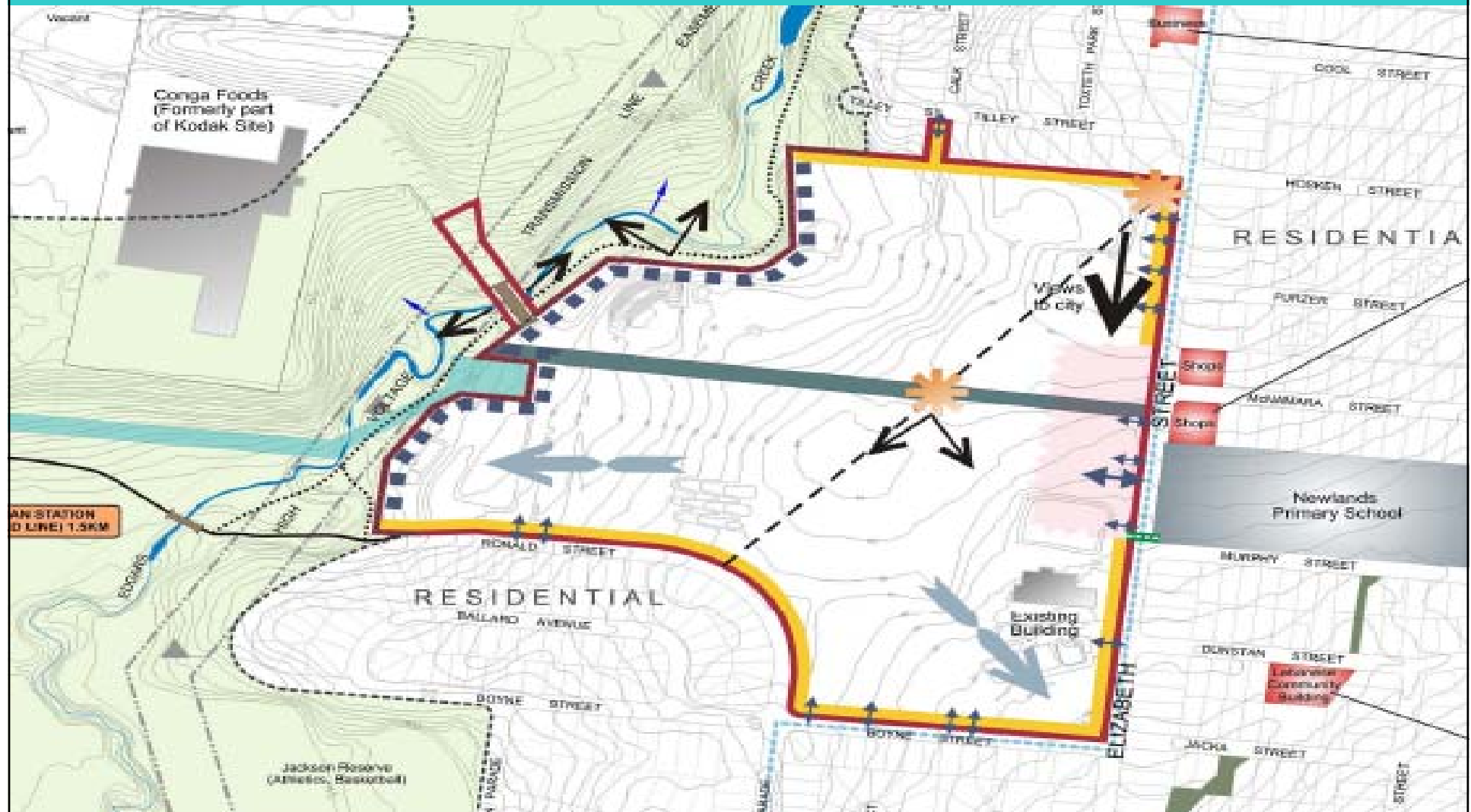
Leigh Holmes  
Spiire Australia



# Kodak Australasia



# Site attributes



# Site Constraints

- Steep Topography
- Edgars Creek embankments
- Density
- Site Value
- Pipe Track





# Stormwater Strategy

## Masterplan

- Minimise offsite discharge
- Promote water sensitive cities approach
- Best practice discharge
- Reduce potable water consumption
- Rainwater harvesting
- Protect Edgars Creek

## Strategy

- Efficiency of land use
- 'At source' or distributed treatments
- Reduce 'end of line' treatments
- Control building outcomes
- Promote a variety of outcomes

## Outcomes

- 45 nodal rain gardens within the streetscape.
- 3kL rain tanks on all allotments plumbed to toilet, laundry and external irrigation.
- A 500 m<sup>2</sup> rain garden in Melbourne Water's pipe track.
- A 150 m<sup>2</sup> rain garden in the medium density site.



## Rain Gardens

- Efficient land use
- Increased amenity
- Low Maintenance
- Small footprints in order to deal with existing grades

# Implementation

Guy Williamson  
Satterley Property Group

Brought to you by





# Efficient land use

Existing local 'green' community

Council supports nature strip planting

Native / indigenous planting



Rain gardens



# On site treatment

Kerb adaptors essential for rain garden efficiency

Use of rainwater tanks

## Benefit of rainwater tanks



Partial Allotment  
scale treatment



Reduce use of  
potable water

# Impervious areas

Minimise runoff from impervious areas

- Encourage double storey
- Encourage rainwater tanks

## Controls



Design  
Guidelines



MCP



BCA

# Institutional Barriers

- Council were reluctant to allow kerb adaptors
- Maintenance
- Planning controls





# Engagement

- City of Moreland
- Melbourne Water
- Community:
  - Engagement with Friends of Edgars Creek
  - Involve community through planting days
  - Education of WSUD within the estate



# Conclusion

## Pre-work

- Do your homework
- Know your site

## Collaboration

- Maintain a collaborative approach from planning through to implementation

## Approach

- Stakeholder engagement
- Be prepared to be flexible