

South Australia's Environment Protection Authority

South Eastern Edwardstown Community Working Group



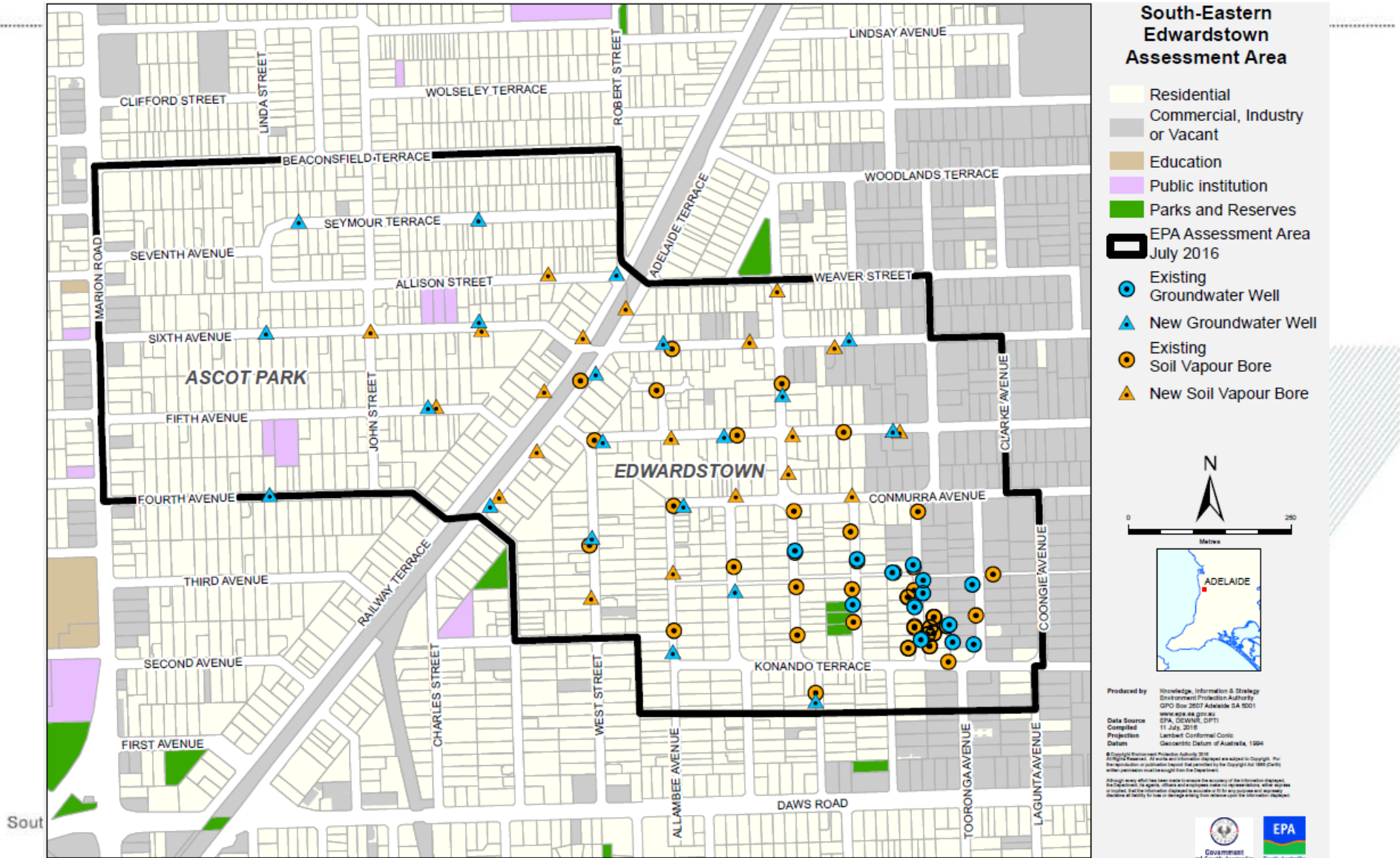
Tuesday 12 July 2016



Agenda

1. Welcome and introductions
2. Results from the Stage 3 environmental assessments
3. Next steps
4. Learnings from Australia and Germany
5. Questions
6. Next meeting

Assessment area



2. Results from Stage 3



- Based on the maximum measured soil vapour concentrations, and adopted geological parameters, no unacceptable vapour intrusion risks are predicted.
- All modelled indoor air concentrations are well below guidelines.

2. Results from Stage 3 (cont)

Chemical of potential concern	Indoor air screening criteria ($\mu\text{g}/\text{m}^3$)	Predicted indoor concentration ($\mu\text{g}/\text{m}^3$)
tetrachloroethene	200	0.015
trichloroethene	2	0.06
cis-1,2-dichloroethene	8	0.001

Based on May 2016 data, *no unacceptable vapour intrusion risks are predicted in the residential area.*

2. Results from Stage 3 (cont)

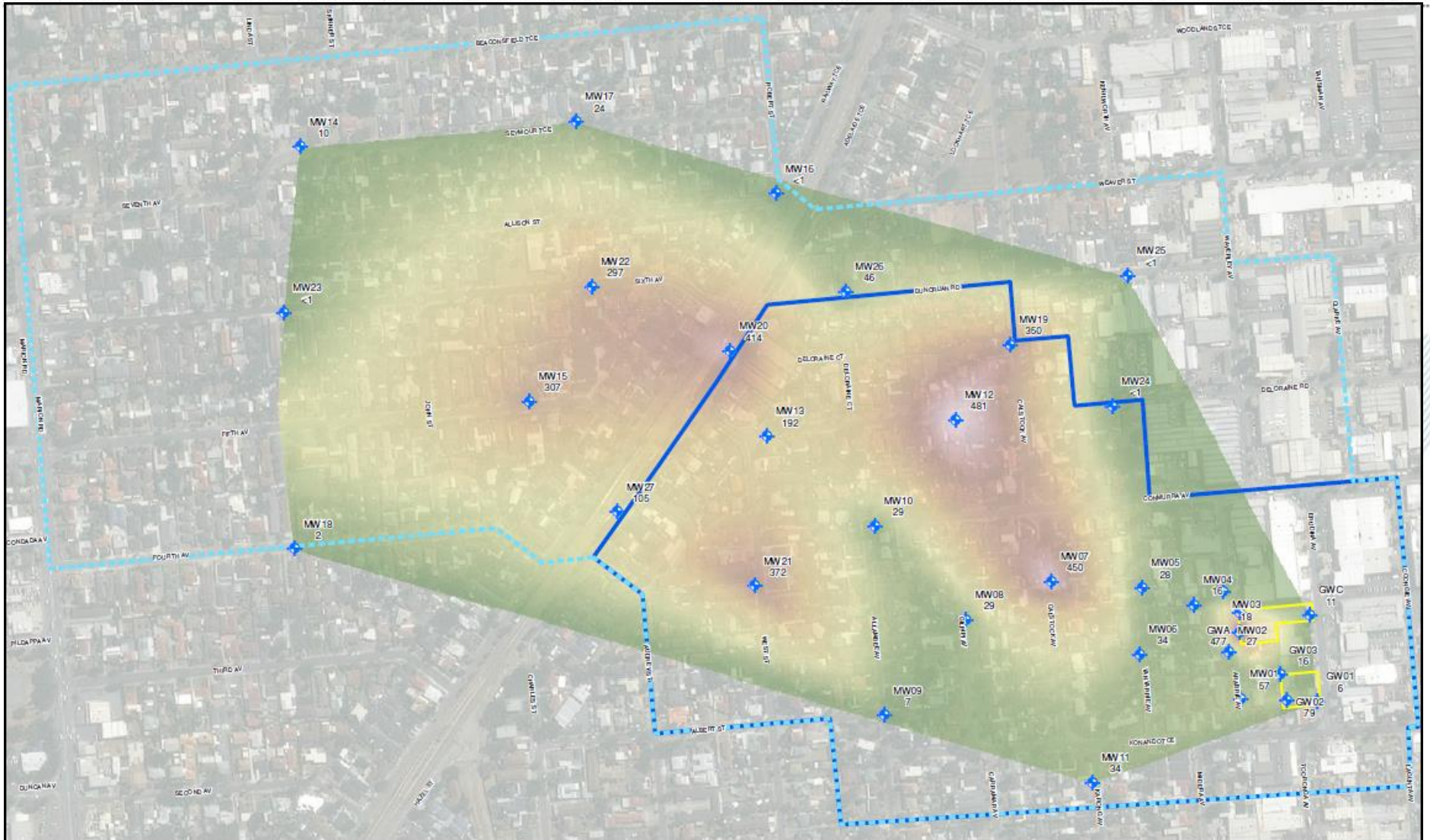
Modelling takes into account:

- Soil type
- Moisture content
- Depth of sampling

Groundwater conductivity:

- Ability of the aquifer to allow groundwater flow
- Calculated based on field tests
- Edwardstown area groundwater conductivity calculated to be between 5 and 10cm per day

Groundwater - TCE



Soil Vapour - TCE



Predictions are seasonal

- Results are lower than the TCE concentrations reported in the previous round of testing by Fyfe (2016).
- This is principally due to the assumed soil properties, adopted by Fyfe, being more conservative than those measured in this investigation.



Predictions are seasonal



- Predictions are lower than the previous 2-20 $\mu\text{g}/\text{m}^3$ '*investigation*' range
- This is due to the moisture being higher in soil.
- The EPA will be retesting in warmer months.

TCE indoor air level response range

Indoor Air Level:
Nothing detected

Indoor Air Level:
Above detection –
less than 2 $\mu\text{g}/\text{m}^3$

Indoor Air Level:
2 - <20 $\mu\text{g}/\text{m}^3$

Indoor Air Level:
20 - <200 $\mu\text{g}/\text{m}^3$

Indoor Air Level:
200+ $\mu\text{g}/\text{m}^3$



Safe



Safe



**No immediate
health concerns**



**There may be a
health risk**



**There is a health
risk**

Next steps

- Next stage of works to be undertaken in spring (warmer months)
- Delineation of contamination (groundwater and soil vapour)
- Intensified sampling in vicinity of highest concentration to determine likely source(s) location(s)
- Additional testing of soil properties and aquifer properties
- Further site specific testing on properties previously tested in summer 2015/2016
- May include site specific around sampling location 'VP29'

Remediation and mitigation options...

- Andrew Pruszinski

Questions

- Fruit & vegetables

Thank you and next meeting

Tuesday 30th August – 7:00pm

EPA will present next steps in more detail