

South-eastern Edwardstown

Community Working Group

Tuesday 23 February 2016: 7pm for 7:10pm start (light refreshments provided)

Active Elders Association, Charles Street, Ascot Park

Name	Representation	Name	Representation
Andrew Pruszinski	EPA	Kath McGregor	Resident
Danielle Torresan	EPA	Nida Janjua	Resident
Mitchell (Mitch) Talbot	EPA	Chris Manias	Resident
Dale McGill	EPA	Elizabeth (Pam) Webb	Resident
Rachel Hudson	EPA	Gayani Fernando	Resident
Dr Sim Ooi	Salcor	Nida Janjua	
Marc Andrews	Fyfe Earth Partners		
Mary Manias	Resident		
Selena	Resident		

Welcome and introductions

Danielle welcomed everyone to the meeting and introduced Dr Sim Ooi (Vapour Intrusion Risk Specialist) and Rachel Hudson (Principal Advisor Community Engagement) to the Community Working Group (CWG). New members included Nida, Dale, Mitch and Marc. Danielle briefly ran through some key aspects of the Terms of Reference.

Danielle invited questions and comments for the open Group discussion, followed by a recap of some past matters raised.

Questions raised by the CWG, with responses provided by the EPA

1. What is the scope of the EPA's authority? What are your legislative powers?

The Environment Protection Act, 1993

The EPA enforces and administers the *Environment Protection Act 1993* (the Act). It is an offence to pollute the environment and cause environmental harm. The penalties are severe and may include imprisonment if determined by the Court.

The Act also has provisions that relate to site contamination. These provisions allow the EPA to issue orders for assessment or remediation. It is not an offence to have caused site contamination, but it is a criminal offence to not comply with an order.

The person who has liability for site contamination is the person who caused the contamination, which is sometimes referred to as the 'original polluter'. If the person who caused the contamination has died or the company no longer exists or is unable to fund the work required by the order, then the order cannot be issued or enforced. If there is no person with liability then the site is termed as an 'orphan site'.

Additionally, an owner of a property can have liability in certain circumstances. A person can accept liability as part of the sale of land.

The Development Act, 1993

In relation to site contamination and land division, the EPA has no power of direction, meaning it is solely an advisory agency under the *Development Act, 1993*.

The EPA provides formal advice on larger scale land divisions i.e. greater than 49 land parcels.

For smaller scale land divisions (such as hammer-head or one-into-two divisions), the EPA may provide informal advice to the local Council, if requested.

The EPA also provides advice to the local Council or the Development Assessment Commission for land rezoning applications.

2. Why do we call it an 'orphan site'?

An 'orphan site' is the name given to a parcel of land where site contamination exists. Such sites are classified when the EPA has either not been able to identify the original polluter, the person has died or where they have been identified but are not able for financial or other reasons to undertake the necessary action.

In these circumstances, the EPA takes on the management of site contamination (on behalf of the Government) including the assessment of potential health risks posed by the site contamination, including management of all communication and engagement with residents and other stakeholders.

Orphan sites may result in an EPA Assessment Area, such as the South-eastern Edwardstown EPA Assessment Area.

3. Who's responsible on farmland, such as the case at Williamstown?

The RAAF Williamstown contamination is the result of the historic use of firefighting foams. The environmental impact from the use of these foams is an emerging issue. The chemicals in the firefighting foam (perflouranted compounds) behave differently to the chemical TCE in the environment, as it is not present as vapour.

EPA's worldwide are trying to determine the significance of the presence of these substances (perflouronated compounds) in the environment.

4. The property values in Edwardstown are a major concern – why does Council allow more residents in the formerly industrial area?

The EPA is not able to answer on behalf of Council, however we will continue to invite Council to our upcoming meetings. We will contact Council to invite a representative to address this question at our next meeting.

5. What is happening with land development in this area?

Please see above response.

6. How do we remove the stigma associated with particular suburbs being contaminated when the issue is much wider?

The EPA has had discussions and held previous meetings with real estate agents, bank representatives and the Valuer-General to provide clear and concise information about the potential impact of the assessment work and what this may mean for land sales and value.

In relation to the City of Marion (Council), the EPA has provided written advice outlining the extent of the contamination and that it does not consider it necessary to put a blanket halt on Development Applications whilst the assessments are being undertaken.

7. How do we educate the banks about the level of risk?

If you are having trouble with getting finance to purchase properties in the area, the EPA strongly advises residents to please refer the bank manager to a member of the Site Contamination team via the site contamination number 1800 729 175. For other assessment areas, the EPA has spoken previously to banks to provide reassurance that the assessment process should not prevent any sale of properties.

8. Is there any other form of influence the EPA can have?

The EPA is willing to assist in any way it can, however it is limited by the existing powers under the Environment Protection Act in terms of what can be enforced.

9. Are you able to force Council's hand?

No. The EPA does not have any legislative jurisdiction over Council in relation to what determinations Council makes for land development applications or subdivisions.

In relation to the South-eastern Edwardstown assessment area, the EPA has provided written advice to Council in terms of the known site contamination and future land developments within the assessment area.

10. What's in the ground and how is it coming up through the cracks?

Trichloroethene (TCE) is the chemical substance that is of interest within the South-eastern EPA assessment area. TCE is an industrial solvent that was used widely in the past by many industries as a degreaser.

TCE is what is termed a 'volatile chemical substance', meaning that it can transition from a liquid phase to a vapour (gas) phase with relative ease, which is the case for the TCE identified in groundwater at South-eastern Edwardstown.

Once in its vapour phase, TCE can move upwards through the soil profile. Although vapour does move through cracks in the soil it is helpful to think of the underlying soil as a jar full of marbles with small gaps or 'voids' in which the vapour can move through. Some soils such as clays and silts have very small voids while sands and gravels have larger voids. As the vapour moves up through the soil profile it attenuates, meaning that the concentrations of TCE will decrease.

11. At what rate and in the long term, how do we know where the contamination is moving?

The groundwater flow rate, within the EPA assessment area, has been calculated to be approximately 15 metres a year in the aquifer of interest. Please note that this does not necessarily represent the rate at which the TCE is moving in the groundwater.

This was calculated by Greencap (site contamination consultant) from hydraulic (groundwater) testing of the groundwater wells drilled and installed during April and May 2015. This is reported in the August 2015 Greencap report, which is available on the EPA Public Register and on the EPA website via the following link:

http://www.epa.sa.gov.au/data_and_publications/site_contamination_monitoring/investigations/south_eastern_edwardstown#cwg (please scroll to the bottom of the page to the link under 'Site Assessment Reports').

The direction of groundwater flow, in the assessment area, has been predicted to flow in a north-westerly direction.

It is possible to predict how far the chemicals in groundwater (groundwater contamination) will spread over time. This is undertaken using computer (mathematical) modelling, which is referred to as 'groundwater contamination fate and transport modelling'.

This has not been completed for the assessment area as groundwater well drilling and sampling activities did not form part of this stage of the environmental assessment program.

This stage of the environmental assessment program has focussed on understanding the potential vapour intrusion risks associated with the TCE for both residential and commercial/industrial properties within the assessment area.

The EPA has advised the community within the assessment area to not use bore water for any purpose.

Additional information on groundwater flow rate and direction

Groundwater flow rate is calculated using a mathematical equation referred to as 'Darcy's Law'. It follows the basic principle that water will flow from a point of high pressure (higher elevation) to low pressure (low elevation).

The calculation also incorporates factors relating to the properties of the soil that the groundwater is flowing through.

The direction of groundwater flow is determined by creating a groundwater contour map based on the elevations (levels) of groundwater measured in groundwater wells within the area.

12. How long will the EPA be looking at these sites in the long term?

The timeframe for ongoing testing may vary. However, it is necessary for the EPA to review and understand the findings/results in the upcoming Fyfe report to determine what further assessment may be required.

13. Is there a way of neutralising TCE?

Many approaches to neutralising or remediating TCE within groundwater have been investigated by the site contamination industry both at national and international levels. Although some of these methods have had success within the laboratory and on a small scale, no current practical or sustainable method exists for neutralising TCE on a significant scale.

14. What is the flow rate?

Please refer to the response provided to question 11.

15. Are you planning on placing further bores over the Adelaide Terrace boundary?

Not at present. The EPA is waiting for the completion of the Fyfe report to determine what further work will be needed. One of our ongoing goals however, is to define the boundary of the TCE in groundwater and soil vapour.

As such, given that very low concentrations of TCE have been found in soil vapour along Adelaide Terrace, from the preliminary soil vapour data it is likely that we will be undertaking further assessment across Adelaide Terrace in the future, to understand the extent of the plume.

16. Can the speakers please be amplified next time?

Yes, we are happy to arrange a microphone for the next meeting.

Vapour Intrusion Risk Modelling - Presentation by Dr Sim Ooi

Dr Sim Ooi gave a presentation on vapour intrusion risk assessment modelling, what is considered in this modelling and what the data tells us. Mathematical computer modelling is a tool that can be used to assess and understand the potential for vapour intrusion to occur at properties. It assists in predicting whether the below ground concentrations of vapour (the soil vapour) are high enough to potentially migrate into a building.

Edwardstown Hills environmental assessment – what's new

The Site Contamination Audit Report for the Edwardstown Hills environmental assessment is due to be received by the EPA shortly. In a period of no more than twenty-one days, the EPA will undertake an administrative review of the document and ensure that it meets legislative guidelines, before releasing it publically and placing it on our website.

Within this period, we will be writing to all affected landowners and inviting them to two community information sessions, where they can meet with EPA staff and have their questions answered. We will extend this invitation to the CWG and provide you with a copy of the report, either via email or a link to the website. Hard copies can also be provided on request.

Community engagement and communication update

Rachel Hudson has joined the EPA in the first instance to work with the site contamination team, and is available via any of the details below, should you wish to ask any questions of the team or would like further information on any aspect of the work. Rachel is happy to be contacted both during and after working hours. Please leave her a message if she doesn't answer straight away.

Actions

- Council to be invited to the next meeting to answer questions regarding property development.
- SA Health to be invited to the next meeting following receipt of the Fyfe report.
- A microphone to be arranged for speakers at the next meeting, to assist those with hearing difficulties.

Next meeting

The next meeting is proposed for 7pm on either 16 or 17 March 2016. The meeting will be held following receipt of the Fyfe Report for the South-eastern Edwardstown Assessment Area, and the EPA will discuss the results and findings. The EPA will also extend the invite to SA Health, the City of Marion and the local Member for Parliament (Annabelle Digance). report for th.

Please can you advise Rachel Hudson of your preference of date, either by phoning her direct on either (08) 8124 4216, 0403 809 754 or rachel.hudson@sa.gov.au .

Further Information

Community Information line 1800 729 175

Email EPASiteContam@sa.gov.au

Website www.epa.sa.gov.au

For any questions specific to health, please contact the Scientific Services Branch of SA Health.

Phone 08 8226 7100

Email public.health@health.sa.gov.au