

## Executive Summary

### SUITABILITY FOR RE-ZONING

#### Majority of Site

Based on the results of the validation testing and the QA/verification survey, the Auditor considers that from the perspective of contamination, the majority of the land units except the Eastern Sector and those areas not yet investigated, can be thus be classified as:

*"having been remediated such that the site does not pose a risk to the environment, and if developed for residential purposes would not pose a risk to human health"* (DUAP's terms in Brief for Stage 2 Audit.)

In NSW EPA terms, the majority of the site is suitable for "residential, including substantial vegetable garden and poultry", i.e. any form of residential land use, or less sensitive land use including schools, parks, recreational open space and commercial/industrial use.

#### Eastern Sector

The Eastern Sector has not been fully investigated nor remediated of suspected munitions debris due to restrictions on clearing protected plant species in this area. Therefore, the Eastern Sector should be zoned as a restricted access, conservation zone. To minimise the risk to people using this reserve and to the public in adjoining suburbs, the Auditor recommends that:-

1. The area be surrounded with a high chain mesh fence to restrict unauthorised entry.
2. A strip of land 5m wide on each side of the path should be shallow searched with a metal detector and any ordnance related items removed.
3. Visitors to the area be accompanied by a guide and movement be restricted to boardwalks and well marked paths.
4. The potentially contaminated area in the south bordering QEL is to be shallow searched with a metal detector for a distance of at least 100 m inside the Boundary.
5. The potential "throw out" zone (100 m wide) around Sites 15 and 24G should be shallow searched with a metal detector.

#### Other Excluded Areas

Several other areas have not yet been investigated and hence their contamination status and suitability for various land use remains unknown. Their locations are shown on the map in Appendix F.

These include:

- Remaining original buildings, roads and car parks, particularly in the Administration areas.
- The soil under the concrete stockpile in Central Sector West.

Consent conditions for re-zoning should include a provision for a contamination assessment of these areas, prior to redevelopment. Once these have been tested and remediated (if necessary) a new site audit statement may be issued for them.

#### Site Audit Statements

Site Audit Statements have been issued separately for each of the different categories based on their suitability for land use and the recommended conditions. These include:

#### Site Audit Statement No.

- CHK001/1 Unrestricted residential
- CHK001/2 Eastern Sector - restricted access conservation area
- CHK001/3 Unrestricted residential with conditions for resurvey of earthworks for active recreational land use
- CHK001/4 Unrestricted residential with conditions for resurvey of earthworks for active recreational land use
- CHK001/5 Unrestricted residential with conditions for resurvey of earthworks for active recreational land use
- CHK001/6 Not yet tested - Buildings and structures
- CHK001/7 Not yet tested - Concrete stockpiles

Copies of the Site Audit Statements are provided in Appendix G.

### CONCLUSIONS

Based on review of the available information, the Auditor concludes that:-

- The contamination investigations, remediation and validation conform with the relevant guidelines in place at the time of the work (1991-1996), and conform with the essential elements of subsequent NSW EPA contaminated land management guidelines.
- The remediation acceptance criteria which were based on ANZECC B (Environmental Investigation Levels), the NSW EPA Service Station Guidelines and the soil explosives criteria used by the US Army, are considered appropriate, in fact, they are conservatively lower than soil investigation levels for any form of residential land use published by the NSW EPA (1998).



## Executive Summary

- The majority of the St Marys site (excluding the Eastern Sector) is considered to be suitable for any form of residential land use, including sites with substantial vegetable garden and poultry.
- Despite the thoroughness of the remediation and validation, there is a risk, albeit low, that some small amounts of chemical contamination and identifiable items of explosive ordnance may remain on the site due to its extensive nature.
- Based on the validation results, the Auditor considers that the level of residual risk of finding any identifiable piece of explosive ordnance with hazardous content, to be significantly less than  $1 \times 10^{-6}$  over the majority of the site excluding the Eastern Sector.
- The risk of harm to the public from EO remaining on the majority of the St Marys property (excluding the Eastern Sector) is considered to be lower again than  $1 \times 10^{-6}$  (i.e. less than 1 in 1,000,000) because contact alone with the range of hazardous items EO found at St Marys is unlikely to cause injury, unless hammered or burnt in a fire. This level of risk (i.e. less than 1 in 1,000,000) is acceptable by most authorities responsible for planning or public health.
- The risk of exposure by the public to any ordnance that may be remaining on the St Marys site, will be reduced considerably by the construction of roads, paths, buildings and lawns
- Should active recreational land uses e.g. sports grounds, school grounds and picnic areas, be planned in any of the three areas (Site 6, Site 23 and QEL) where the QA/Verification indicated a higher risk prior to reworking, the Auditor recommends that the final surface of any areas of earthworks in these areas should be subject to a metal detector search by appropriately qualified and experienced personnel and the results should be reviewed by an independent site auditor.
- Management plans should be lodged with the relevant local authorities to provide procedures for the safe handling and disposal of any ordnance that is encountered during site earthworks and should be similar to the management plan provided in Appendix E.
- The Eastern Sector should have restricted entry and controlled access because it has not been adequately investigated and validated and may contain remnant items of explosive ordnance, particularly around Site 15 and Site 24G.
- A specific management plan should be lodged for use of the Eastern Sector to restrict entry and limit access to designated boardwalks and paths. This plan should also include procedures for the safe handling and disposal of any ordnance that might be encountered.
- There are a number of original buildings and other structures on the site including the crushed concrete stockpiles under which there has not yet been sufficient investigation for contamination including explosive ordnance. Consents for rezoning should include provision for testing under these facilities when they are demolished or removed in the future. Maps indicating the location of these facilities are included in Appendix F of the report.