

Environmental issues

Energy Management

3.1 In its submission to the Committee, DHA advised that all residences would be constructed in such a way as to provide optimal passive solar performance. They would achieve a minimum four-star energy rating in accordance with Commonwealth government policy.¹ In addition, the layout of the houses would maximise use of breezes and shading.²

3.2 At the public hearing the Committee requested that DHA explain the passive solar principles they intend to adopt in the construction of the residences.³ DHA advised that in respect to the proposed works:

We are generally looking for the long side of the house to take a northern aspect. We are looking to minimise the number and size of windows facing the west—the setting sun—where the strong summer heat comes from. We are looking for the family rooms and living rooms to be northerly oriented to take in the low rising winter sun. They would then not be affected by the summer sun, which is nearly vertically overhead at midday. So the design of the house basically is open to let the winter sun in, avoid the hot summer sun, and also to avoid the setting sun at the same time.⁴

3.3 At the public hearing, the Committee questioned DHA as to whether it had discussed energy management with the Australian Greenhouse Office

1 Submissions, p. 8.

2 Submissions, p. 5.

3 Evidence, p. 4.

4 Evidence, p. 5.

(AGO). It is a requirement that all Commonwealth government agencies consult with the AGO to ensure that the most energy efficient designs relating to energy consumption are achieved. This helps to ensure that Australia meet its requirements to reduce greenhouse gases.⁵

3.4 DHA advised the Committee that:

There has been no direct consultation on this development. However, we do keep ourselves informed—and that was part of what we did with Duntroon—as to what their requirements are, and we are working to be within those requirements. Their basic requirement is that all government housing must have a four or better rating. We work to that model to ensure that we have those sorts of ratings.⁶

Contamination

3.5 Evidence submitted to the Committee by DHA indicated that DHA had commissioned an investigation of the geotechnical parameters of the site of the proposed works.⁷

3.6 The site investigation was conducted by URS Australia Pty Ltd in accordance with Queensland Environmental Protection Agency (QEPA) Draft Guidelines for the Assessment & Management of Contaminated Land In Queensland (May 1988). The findings revealed that:

- arsenic concentrations detected were above QEPA Environmental Investigation Levels (EILs)⁸, and above the QEPA Exposure Setting A (standard residential) guidelines of 100mg/kg in 28 of the 59 soil samples analysed.⁹

3.7 The Committee notes from its examination of the URS Australia Pty Ltd report that two samples were chosen for analysis for organochlorine pesticides. These samples were selected for analysis as they were down hill from a previous sampling area where Dieldrin¹⁰ had been detected.¹¹

5 Evidence, p. 8.

6 Evidence, p. 8.

7 Submissions, p. 3.

8 The EIL values are trigger levels that indicate further investigation is required.

9 Exhibit 4, p. 6–1.

10 Organochlorine compounds or chlorinated hydrocarbons are a group of insecticides which mainly act on the central nervous system. They tend to be persistent in the environment and

No organochlorine pesticides were detected in the two samples chosen for analysis by URS Australia Pty Ltd.¹²

3.8 The URS Australia Pty Ltd report made the following recommendations:

- that the natural soil and rock at the site be left in-situ given that the arsenic concentrations appear to be naturally occurring;
- it would be unwise to cause undue disturbance of the soil, particularly during construction, unless adequate management measures are taken; and
- it would be prudent for future land owners to be advised of the presence of elevated concentrations of arsenic in the natural soil to minimise the potential for adverse human health impacts via excess soil ingestion or use of home grown fruit and vegetables.¹³

3.9 DHA further advised the Committee that additional work is being undertaken in consultation with QEPA to determine the most appropriate approach to remediation.¹⁴

3.10 At the public hearing the Committee questioned DHA extensively regarding the danger posed by the contamination on the site. The Committee asked:

- (a) whether DHA was proposing to get further advice on whether the arsenic is naturally occurring or whether it is coming from some other source; and
- (b) whether DHA is proposing to advise occupiers and future landowners of anything on that site of the presence of arsenic in the natural soil?

3.11 DHA advised the Committee that:

Matters of this nature require that we consult with the Environmental Protection Agency. Our consultants, URS, have been in close consultation with the Environmental Protection Agency in the preparation of this report. This report has now gone to the Environmental Protection Agency for assessment and comment. Depending upon their assessment and comment, we

can build up to toxic levels in the body fats of other animals higher up food chains. They include DDT, Aldrin, Dieldrin and Endrin amongst others.

11 Exhibit, 4, p. ES-2 .

12 Exhibit, 4, p. ES-2.

13 Exhibit, 4, p. 6-1.

14 Submissions, p. 3.

will determine exactly our next steps. The process, as I understand it, is that they will determine whether the site is required to go on to the environmentally managed register. If they determine that, there are then further steps that have to be followed, such as management plans for the site, what sort of activities should be carried out on the site and what sort of notifications should be undertaken. It is our intention to continue to undertake that work, but we are seeking to have the EPA input first to just strengthen the direction in which we might take that further work.¹⁵

- 3.12 The Committee also questioned DHA regarding the financial impact on the proposed works if the Queensland EPA were to determine that the site be listed on the Environment Management Register. DHA advised that if the Queensland EPA were to issue an adverse finding it would not recommend to the Board of DHA that it approve the works.¹⁶

Conclusions

- 3.13 The Committee reiterates its views regarding energy conservation as detailed in its recent report – *Redevelopment of Residential Areas at Royal Military College, Duntroon, Australian Capital Territory*,¹⁷ that dwellings constructed by Commonwealth departments and agencies should lead the way in effecting change in how energy is managed in the community. Therefore, the Committee is of the view that in future public works, where relevant, proposals submitted for consideration should provide:
- both a detailed comparative cost analysis between the various forms of energy management for the proposed development; and
 - ensure that consultations have taken place with the AGO about the most appropriate and effective methods of minimising energy consumption in their development proposal for the purpose of meeting Australia's commitment to greenhouse emissions.¹⁸

15 Evidence, p. 9.

16 Evidence, p. 10.

17 Australia. Parliament. Parliamentary Standing Committee on Public Works, Report No. 12 of 2001, *Redevelopment of residential areas at Royal Military College, Duntroon, Australian Capital Territory*.

18 Australia. Parliament. Parliamentary Standing Committee on Public Works, Report No. 12 of 2001, *Redevelopment of residential areas at Royal Military College, Duntroon, Australian Capital Territory*, pp. 22-23.

- 3.14 In relation to reported soil contamination at the Enoggera site, the Committee strongly expresses its concerns regarding the recommendation by DHA's consultant URS Australia Pty Ltd, that it would be prudent to warn future land owners of the presence of elevated concentrations of arsenic in the natural soil to minimise the potential for adverse human health impacts via excess soil ingestion or use of home grown fruit and vegetables.
- 3.15 Based on evidence presented during the Inquiry, the Committee noted that if QEPA were to list the site on the Environmental Management Register then environmental management measures would have to be taken prior to construction of the proposed residences and occupation by Defence personnel.
- 3.16 The Committee agrees with the Managing Director of DHA, Mr Keith Lyon,¹⁹ that if QEPA were to issue an adverse finding, that is, list the site on the Environmental Management Register, the Board of DHA should not give its approval to proceed with the proposed works.

Recommendation 1

- 3.17 **The Committee recommends that no construction work be undertaken on the site until the Queensland Environmental Protection Agency (QEPA) has assessed and commented on the *Enoggera DHA Preliminary Site Contamination Assessment*.**

Recommendation 2

- 3.18 **The Committee recommends that where QEPA determines that the site of the proposed works is required to go on to the Environmental Management Register, the proposed works not be undertaken.**

¹⁹ Evidence, p. 10.

Recommendation 3

- 3.19 **The Committee recommends that future land owners and occupiers of the site of the proposed works be advised of the presence of elevated concentrations of contaminants in the soil and the potential for adverse human health impacts.**