

Addressing Heritage and Contamination Environmental Issues in Valuation/Appraisal Assessments

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SUMMARY

The Heritage¹ and environmental contamination issues effecting land and the associated valuation/appraisal assessments fall into two key topics. The first is “protection of heritage” which is generally of the site’s structures. The second is “contamination of the environment” which generally occurs via the nature of the materials of the structure or the toxicity in the soil. Both issues can have a substantial impact upon the process and outcome of the valuation/appraisal assessments being undertaken.

The requirement or desire to protect heritage structures which contain some materials that are now considered contaminants to the environment causes a conflict between two desirable outcomes. Many of the sites in question are located in areas that are valuable and in heavy demand for redevelopment.

In some cases contaminated land (via toxicity in soils) creates its own unique assessment difficulties. Enhanced technology for “clean up or containment” where there is a heritage structure in place is an even more complex matter.

This paper will address heritage, contamination and environmental issues and some of the methods, technology and advancements that are enabling valuation/appraisal assessments for such sites to be undertaken with a higher degree of accuracy.

The experience of Valuer-General Victoria provides a case study of a sophisticated forensic valuation²/appraisal approach to the valuation of “heritage contaminated land³” which can facilitate viable development to take place. Furthermore, by using this process, risk is reduced via the increased use of specialists in various fields of site investigation.

This paper will provide information on both the heritage and substantial environmental issues that need to be addressed. The application of these techniques enables sites to be regenerated and returned to an economically viable, socially acceptable and productive use.

¹ Heritage: A place and/or structure which has significant historic importance. Considered by the community worthy of retaining onto for generations.

² Forensic Valuation: Incorporates a scientific and quantifiable aspect to the valuation process.

³ Heritage contaminated land: Structure and/or land contaminated or effected by chemicals

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1. ALTERNATIVE USES

1.1 “End Game Scenarios”

It is crucial to establish a number of alternative uses for a site. This is based upon the assumption that the site maintains its heritage features for registration⁴, however is also *clean*, that is, free of contamination.

The purpose of identifying a range of uses, (for example warehouse, office building, residential, open paved storage), is that the highest and best use (based upon heritage constraints), can be determined only after taking into consideration the cost of the clean up of any contamination and rectification works. All factors must be taken into consideration, which, of course, could potentially result in a lower end-use value.

The identification of these alternative uses within heritage guidelines will establish the viability as to the extent of clean up needed to be undertaken and accordingly, will establish the justifiable value of the site/building. For example, a site and warehouse used for the storage of cargo goods (which would require a lesser degree of clean up) would be valued less than an office/warehouse complex (which is likely require a greater degree of clean up).

As a general rule ‘Residential Use’ requires the most extensive degree of site decontamination works. This is inevitably expensive and requires either the removal or treatment of contamination on site.

In addition, if the proposed development is further complicated by the building/site having significant heritage constraints, a residential use becomes cost prohibitive.

An alternative use such as an office/warehousing or commercial activity can, however, often be financially justified.

In order for such alternatives to be fully considered, the use of a cost and land use matrix will often justify such rectification works. These individual feasibility assessments are therefore vital when dealing with contamination on a heritage site-specific appraisal project. For example, an office/warehouse development requires the following processes to be undertaken:

⁴ Registration: A Government system of identification which enables recording and protection to be maintained, in addition to providing information about the significance of heritage listings.

- To identify heritage features and often the “rarity” or significance of the items. For example, a gantry crane that is the only 1930s crane on its original, site in the Port.
- The registration of the heritage overlay can, for example, cover not only the “historic cargo shed”, but also the related wharf structures and concrete and bluestone pitched roadways.
- To identify that the highest and best use of the subject site can also be influenced by the zoning within the district.

The forensic data for assessment can thus be established and the valuation can proceed.

1.2 Importance of Planning and Heritage Authorities

Based upon a mixed use zoning, a number of alternative uses can be considered. Furthermore, in many parts of the world the local planning guidelines or regulations that is vested with heritage authorities will also permit a ‘special application’ to change an “in use” to be considered in order to assist developers to find economical solutions to correct contaminated site catastrophes.

Consultations with these authorities is vital when attempting to identify a solution to this twin issue and yet maintain an economically viable outcome. Cooperation and respect shown by all parties involved in such a project is required as conflict and competing interests have a tendency to either delay or prevent the process of moving forward altogether.

Heritage authorities often provide “Statements of Significance” and advice on heritage categories, construction details, extent of registration, rarity and general references. Understanding the implications of this information and appreciating the heritage matters before addressing the contamination issue is highly desirable. For example www.doi.vic.gov.au/doi/hvolr.nsf provides more information about this.

The planning authorities can often provide great assistance by advising on alternative uses. Many heritage contaminated site/complexes require significant lateral thinking and are often in a dysfunctional state prior to rehabilitation.

Having established the ground work from the planning heritage/authorities of what can be done, it is then a matter of investigating the issue of contamination and other project costs.

2. TREATMENT OF CONTAMINANTS

2.1 Soils

The concept of simply relocating the problem, for example, transferring contaminated soil from under or around a heritage building, is both physically difficult. In many countries it is considered environmentally inappropriate.

To be acceptable, substantial cleaning of the soil particles is required to comply with local environmental standards. The increasing costs associated with ‘dumping’, also tends to encourage more sophisticated scientific remedies to be found.

Modern equipment (such as a Komatsu Reterra) is designed for “bio-remediation” by liming acid sulfate soil/material for stabilisation or treatment to be loaded into a raw material hopper and fed by conveyor into the primary mixing chamber. Measuring sensors monitor the feed of raw materials and additives are added to the feed from the overhead silo for solid additives, or by sprays for liquid additives. Computerised controls ensure that additives are combined at a predetermined required rate. The primary mixing is via a soil cutter whereby pointed blades break up any clods of soil. The material then undergoes secondary mixing via rotary hammers arranged on a three axle system. The material drops on to the discharge conveyor where it undergoes tertiary mixing via an aftercutter located at the top of the discharge conveyor. The discharge conveyor is fully enclosed for both safety and dust control purposes. The rate of material processing can be up to 250 tonnes per hour. Running it through again ensures better mixing and faster remediation.

Exhibit 1



Komatsu BZ210-1 Reterra Mobile Soil Recycle – G mode unit at the Docklands site, Melbourne, Australia



Treating of contaminants (soils) within a building.
www.groundscience.com
Source: Environment & Earth Science International

The treatment of contaminated soils on-site often provides an excellent solution. This is particularly useful when dealing with heritage structures via the use of “back-filling” with treated soil.

2.2 Asbestos

Many heritage buildings throughout the world were, prior to 1970s clad with corrugated asbestos cement sheeting and/or were serviced with pipes lined with asbestos material.

This presents a complication when a change of use is considered for a heritage building as such a change in use usually requires this material to be disturbed.

As a general guide, in the past, occupational health and safety concerns have “overridden” heritage significance. However, today, a solution which accommodates both requirements is the desired outcome.

Exhibit 2



This asbestos clad heritage warehouse is in a prime location for regeneration for a commercial use Source: <http://www.doi.vic.gov.au/doi/hvolr/nsf>

3. FORENSIC COSTS ANALYSED

Having established a number of alternative development scenarios, it is then necessary to identify the precise steps to be taken and to qualify these in terms of cost, time and to separately analyse the risks directly related to both heritage and contamination.

Professional experts should be engaged to undertake investigations and provide advice on costs, time allowance for the whole of the project to be undertaken and risk factors. Risk factors can be extensive as there are effectively three separate projects to be undertaken: heritage remediation, contamination removal and the actual development project.

The above projects and in turn, the related costs are often so significant that the funds available for the land/site purchase represent only a minor part of the overall cost and associated cost of risks allowed.

4. REHABILITATION AND REGENERATION

Rehabilitating and regenerating heritage warehouses located on contaminated land to commercial activities such as offices and cafes is a concept that is growing in popularity. This is particularly so in the fringe areas of major cities that are sometimes close to waterways.

Exhibit 3 shows a warehouse currently under investigation into a similar facility successfully transformed in Sydney, Australia.

Exhibit 3



Shows a warehouse currently being investigated to be transformed into a similar facility recently completed in Sydney, Australia.

Source: Charter Keck Cramer and Multiplex Developments

5. FORENSIC VALUATION/APPRaisal APPROACH

5.1 Sales Evidence

Court precedents and valuation/appraisal principles have lead us to develop a processes for establishing the market value.

Market value is drawn from sales evidence (which can be difficult to find when heritage buildings are involved) and provides a benchmark value upon which further adjustments can be made.

In many cases heritage buildings usually require two adjustments to be made. Firstly development potential and secondly, additional costs. The benchmark value often takes into account the first item.

However, analysis of sales for heritage and/or contaminated sites coupled with discussions with professional experts in the related industries, provide some indicators as to how to approach appropriate allowances. In particular, this is useful for items that are difficult to quantify such as increase a profit or risk allowance, site stigma and constraints placed on titles eg. blot or covenant on title.

5.2 Forensic Assessment

Based upon zoning, a number of uses of sub-groups can be considered and information from various professionals can be drawn together in order to provide the “fabric” of the assessment analysis.

In sites such as heritage buildings, “refurbishment” is usually required in order to maintain the heritage significance of the site. Therefore, substantial deviation from the original use can be both cost and functionally prohibitive. For example, the conversion of a warehouse to an open plan commercial office space and a café would be easier to achieve than a residential dwelling development. However, a gross revenue less development cost for both heritage and renovation cost plus allowance for a profit and risk is required to establish the credentials of this option.

Notwithstanding the above, the added complexity and cost (which may change significantly depending on the intended use), can in some cases result in a different consultation process to be required as a result of the costs related to the “clean up” of the contamination. For example, residential use may have a greater gross realisation, however, significant contamination costs can result in this being overall a lower economical outcome and, in turn, a lower land value.

5.3 Valuers/Appraisers Judgement

The consequences of the site-specific adjustments caused by heritage and contamination issues upon the benchmark value for the alternative use (subject to zoning) is now determined. It still, however, remains the valuer’s/appraiser’s own judgement on the market’s perception of the site, related to current market conditions. However, the increased use of quantifiable adjustments in an assessment should enhance the justification of the assessment and related conclusion.

6. CONCLUSION

The importance of considering alternative uses and the methodology applied when valuing/appraising contaminated sites will, in many cases, allow it to be ‘re-found⁵’ and returned to a viable use.

The refurbishment of protected heritage buildings that are unoccupied and in a state of disrepair, coupled with the rectification of past environment disasters in sought after locations such as city harbourside precincts is both economically viable and morally desirable.

Both the forensic valuation/appraisal and assessment methodologies rely heavily on appropriately experienced experts in both specialist heritage and environmental disciplines. These experts need to be capable of quantifying and qualifying the costs and time frames required for refurbishment of protected heritage properties and the rectification of site contamination issues.

The benchmark value, with site-specific adjustments for the refurbishment of heritage buildings (site surrounds) and the rectification of contamination, will result in providing the valuers/appraiser with an indication of the best outcome and in turn, the level of value for the site.

Specialist organisations, consultants and technology are now available to allow this complex double issue to be resolved

This paper endeavours to provide a further insight and discussion into contamination issues to enable the protection of heritage buildings and removal of environmental risks.

DISCLAIMER

I would like to draw to your attention that the views presented in this paper are my own; and should not be construed as representing those of the State Government of Victoria, Australia.

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⁵ Re-found: used for a specific purpose but had previously been used for a totally different, and now obsolete purpose. A new use in thus “re-found”. For a former warehouse in docklands/harbourside location being converted to commercial office accommodation and café.

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BIOGRAPHICAL NOTES

I have a wide range of valuation experience on major commercial valuation sites, major office buildings, residential development sites and specialist properties, some of which have values in excess of AU\$1 billion. Currently I am involved in valuation issues involving the redevelopment of Melbourne Docklands into a residential/mixed use precinct and the 2006 Commonwealth Games venue.

For a number of years I have presented international conference papers at FIG, these include Buenos Aires- South America, Durban - South Africa, Brighton – United Kingdom, Seoul – South Korea, Washington DC – United States, Paris – France, Athens – Greece and Jakarta, Indonesia. I also presented papers at 46th IFHP World Congress held in Tianjin – China.

I am a member of both the Australian Property Institute (Victorian Division) and Victorian Division of Institute of Surveyors Australia Inc. In addition I also Chair Working Group 9.2, Commission 9, FIG.

I enjoy substantial support from the Victorian Government to promote the benefits of FIG at these forums.

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