

USING FLOOD CERTIFICATES TO RAISE FLOOD AWARENESS

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1. INTRODUCTION

Flooding in the urban and rural communities of NSW, whether that be from our river systems or man made channels and pipes (ie “stormwater”), costs our community many hundreds of millions of dollars every year. State and federal government funding to address these problems is very small in comparison.

Raising flood awareness has been recognised and promoted for many years as a very cost effective means of reducing the impacts of flooding. Dingle Smith (Reference 9) quotes savings of over 80% for commercial properties where owners are informed of their flood problem and take reasonable precautions to lift stock and equipment to higher ground. The affect of flood awareness on flood damage is also highlighted by floods which occurred on the Georges River in 1986 and 1988. The 1988 flood was larger than the 1986 flood, but because there was high flood awareness within the community, actual flood damages are estimated to have been lower than the earlier, smaller flood.

Of course increased flood awareness won't replace the need for other measures, and although the average reduction in flood losses that may be achieved by increasing flood awareness may typically be small (say 5% – 40%), the benefits can be achieved cost effectively and relatively quickly. Flood awareness also has a role within the strategic planning and development approval processes, to increase understanding of the flood issues by proponents and consent authorities with the aim of providing flood compatible development. Raising flood awareness is about increasing the scope and effectiveness of communicating knowledge of flood risks, so that decisions such as where a person will live, what landuses are appropriate in certain parts of the floodplain, or how to design a new building can be undertaken on an informed basis.

In spite of the above benefits, there still a chronic need to raise the flood awareness of most floodplain communities in NSW.

This paper attempts to address some of the issues associated with communicating the flood risk and proposes a system of universal flood certificates as a simple and cost effective means of raising flood awareness in our communities.

2. WHY MAY FLOOD INFORMATION BE REQUIRED?

There are three typical situations where flood information may be required:

- , a prospective developer seeking to determine development constraints and council requirements;
- , existing home owners or prospective purchasers who need to increase their awareness of the flood risks and consequently their preparedness; or
- , existing home owners or prospective purchasers wishing to determine the development potential and value of a property.

It would appear from the authors' investigations that the information needs of the above three categories of persons would be rarely satisfied by the manner in which information is currently compiled or communicated. Indeed the objectives of each category of person can often be in conflict (eg. advice to a prospective developer that council has no policy to restrict development due to flooding may be incorrectly interpreted by a home owner that there is no flood hazard). Many of these communication problems originate from the established mechanisms and practices used to disseminate flood information.

3. HOW ARE COUNCILS CURRENTLY RELEASING FLOOD INFORMATION?

To set the background for this paper, it is important to first establish how councils in NSW are currently releasing flood information to the public.

Except for the very few councils which have decided to implement a flood education program, most if not all councils, only release information when enquiries are made of them. The principal means of releasing this information is either on Section 149 certificates or by letter. In general most councils do not have any formalised or uniform procedures for release of this information.

In an attempt to quantify current practice, the authors carried out a survey of local government practice in April 1998. In total, some 53 councils in the greater Sydney-Wollongong-Newcastle area were surveyed and a summary of results is presented in Table 1 below. (The survey questionnaire and other details can be obtained directly from Drew Bewsher ph 02-9868-1966).

The comments provided by respondents and example documents attached with the return of the survey also provides valuable insight into the usefulness and effectiveness in communicating the information. In this regard the following points are noted:

- , there is almost a total lack of consistency in the level of information provided, the manner in which it may be obtained, the way the information is presented, and overall the way that flood risks are communicated;
- , while advising that a property is potentially affected (or not) by a particular flood (normally the 100 year ARI flood) less than 5% of councils also advise that a larger flood may occur;
- , some respondents were concerned that as council may not have adopted a flood policy, their ability to communicate flood risks is undesirably curtailed;
- , some councils do not have any accurate basis to supply flood information from and therefore either supply no information or base information on general experience and

local knowledge; and
 some councils have flood information but have not yet compiled it in a form or developed processes to allow the information to be disseminated.

TABLE 1: — RESULTS OF SURVEY

Issue	Number of Councils	% of Responses
Number of questionnaires issued	53	—
Number of responses	49	100%
Councils that include flood level data within:		
(a) S149(2) certificates	3	6%
(b) S149(5) certificates	7	14%
Councils that have written procedures for issuing flood data, when enquiries are made	11	22%
Councils that supply definitive flood level data in writing, in a standard format	17	35%

It is the authors' view that the flood information provided by councils rarely satisfies the information requirements of the three category of persons with a legitimate need to know. This is substantially due to the inadequate legislative process dictating the minimum information to be provided - primarily by way of S149 certificates.

4. WHY ARE SECTION 149 CERTIFICATES AN INEFFECTIVE MEANS OF RAISING FLOOD AWARENESS?

As S149(2) and S149(5) certificates issued under Section 149 of the Environmental Planning and Assessment (EP&A) Act 1979, are generally relied upon by councils as the primary means of releasing flood data to the public, some specific comments on this practice need to be made.

The current practice of releasing flood information on S149 certificates, which is detailed in Reference 2, is in disarray. Confusion, inconsistencies and mis-information abound and there are no indications that the situation is likely to improve in the near future. The major problems are:

- councils are only required to advise applicants about flood policies not flood levels nor other details . The community confuses flood policy advice as flood hazard advice;
- if level data is released, it is usually provided on S149(5) certificates. These are not compulsory for sale of land and cost more than S149(2) certificates. Most conveyancers don't use them;
- if either certificate is obtained during a sale of land, few prospective buyers get to read them;

, anecdotal evidence indicates that S149 certificates are now so voluminous and complex that solicitors often do nothing much more than recognise its attachment to a contract as required by law;

, there is confusion over “flooding” and “stormwater” terms;

, liability-conscious councils are within the law if they choose not to release any flood data;

, if information is not provided, an applicant may interpret this as “no flood hazard”;

, insufficient information is provided or it is poorly communicated to allow the general public to interpret what the flood risks (the potential consequences of flooding) are (eg. fast flowing water posing a threat to life or property, flood depth and consequent potential for damage to property, potential for evacuation, warning time, flood duration, and post flood recovery arrangements);

, while councils may not have a formal or detailed flood policy that may affect the development potential of land, this does not mean that flooding will not be an issue to be considered in the assessment of development or building applications - indeed S90(1) of the EP&A Act 1979 demands that the flood hazard be considered irrespective of an existence of a policy;

, S149 certificates are only issued upon request (usually as part of the land sale process) and therefore have limited capacity to facilitate broader community flood awareness programs; and

, there is no consistency in S149 certificates between councils.

These problems with the use of flooding notations on S149 certificates are widespread. Specific details of some of the problems for the councils in the middle and lower Hawkesbury – Nepean valley are discussed in Reference 1.

5. SHOULD COUNCILS ADVISE OWNERS ABOUT FLOOD HAZARD?

5.1 Legal Liability Issues

Readers of this paper should not use any information provided without seeking independent legal advice.

The fact that the statement in the previous paragraph has to be made highlights a current difficulty for councils in that they must seek their own individual legal advice. Not only is this expensive, but the advice given is only as good as the questions asked and often councils are unaware of what questions to ask. As a result there is confusion over councils’ legal liability with regard to the release of flood information to the public.

To get proper advice there appear to be a number of questions which councils must ask of their legal or state government advisors:

- (a) if flood data is available, should the data be released when an enquiry is made?
- (b) if the data is available, and if a flood hazard is identified, should the community be informed even if they don’t enquire?
- (c) if a flood hazard exists above the flood planning level (FPL, usually the 100 year flood level), should the community be informed (even though councils may not have a policy affecting development at the location)?

- (d) what procedures and processes should be implemented to ensure a “good faith defence” would be successful in the event of a liability claim?
- (e) what is a reasonable time between when a council obtains flood information (eg. within a flood study or floodplain management plan) and developing a process for disseminating the information?

Some comments by Peter McClelland QC relating to questions (a) and (d) and reported in Reference 1, indicate that a council does have a duty to disclose information when enquiries are made. Further a council must conscientiously apply itself and act substantially in accordance with the Floodplain Development Manual (Reference 10).

The authors understand that if councils write to the Shires Association of NSW and seek answers to the above questions they are likely to be advised that in respect of question (c), the wording of S149(2) certificates should indicate affectation of land during a PMF event, not just land affected by the FPL. In relation to question (e), it would appear that even information in draft reports should be made available (with appropriate notations concerning the status of the draft report).

Question (b) however is the key legal question for this paper and for the proposal to use universal flood certificates to release data to the public, whether or not the data is requested. The authors are not aware of any legal opinion or case law that has directly addressed this question. Further comments on this issue are provided below.

5.2 Moral and Other Issues

There are obvious arguments for and against the release of information, including those presented in Reference 2. Most arguments usually relate to property values. If a flood problem exists, home buyers or prospective developers want to be told before they buy or pursue a development proposal, but sellers don't want the buyers to know as it may devalue the property.

There is a general perception that if the true state of the flood hazard at a property is revealed for all to see, the property value will plummet. Whilst there are examples of this, often the property devaluation is short lived. Anecdotal data obtained by the authors concerning rented properties in the urban areas of Sydney is that the flood history or future hazard has very little if any bearing on the market rental.

Lambley and Cordery (Reference 12) compared the value, over time, of flood prone properties adjacent to the Georges River in Sydney, with the Sydney market in general. Flood awareness in the community was relatively low prior to the 1986 flood, which increased community awareness and led to some reduction in property values. However, this reduction appears to have been short lived, as other factors such as affordability, supply and demand eventually dominate.

What appears to have most impact on long term property values are the restrictions on the development potential of the property (particularly if commercial or industrial) because of its flood problem, or difficulties which prospective purchasers may have in obtaining finance from some lending institutions. In many cases, these restrictions and difficulties are not as directly related to the available flood data as one might think.

Further, a lot of the 'equity' issues regarding property values arise when the release of flood data changes a property's status with regard to a council's FPL line. The widespread use of a singular FPL has contributed to this problem and the discontinuance of this practice in favour of the planning matrix approach (Reference 11) will go some way to reducing the perceived impact of property values, caused by release of flood information.

To further discuss the issue of release of flood data, consider for a moment other examples which may be analogous to a flood problem. As part of a routine blood test, your doctor discovers you have a terminal disease. Should he tell you? Or another example. As part of a routine geotechnical study, a council discovers that buildings may be at risk from ground slippage, although the risk is difficult to quantify. Should council inform the owners? It is the authors' opinion that most people would want this information revealed, and that councils may very well have a moral obligation to provide it. The liability issue, although apparently untested, may be extremely serious if a devastating flood was to affect persons not notified of the risks, although known to the council

Many councils currently have flood hazard information tucked away in reports and maps that the relevant property owners have never seen. Again it is the authors' assertion that the community should be made aware of the information.

6. USING FLOOD CERTIFICATES TO RAISE FLOOD AWARENESS

6.1 The Proposal

The authors' proposal is that widespread distribution of flood certificates should take place to all owners and residents in the floodplain on a regular basis. These certificates would:

- , report information on flood levels (to AHD) at the property for all design floods, preferably up to and including the probable maximum flood (PMF);
- , be in a universally consistent and plain english format, which includes sufficient information to allow the general public to discern the potential risk associated with the flood hazard (be it small or great);
- , if the PMF or equivalent extreme flood is not known, then a statement should be provided explaining that a larger flood could potentially occur;
- , normally use information taken from flood behaviour studies prepared as part of the State Government's flood policy;
- , be distributed to all owners and residents in the floodplain (ie up to the PMF), not just those below the FPL;
- , make a clear statement as to the source of the information, and most importantly, when information is not available or no flood hazard exists, say so;
- , be distributed regularly, say every three years with rates notices, and without charge. Additional copies could be obtained at a later time for a reasonable fee;
- , have a time limit on the validity of the data, say 12 months. The certificate would also need to be updated if new information became available;
- , for a fee, provide for reporting ground levels and floor levels at the property, so that depths of inundation could be determined; and
- , also be appended to S149(2) and S149(5) certificates, and made available to prospective developers when enquiring about property.

The information contained on the certificates would need to be specific to each property and therefore a comprehensive flood level data base would be required. The information for this would be drawn from flood behaviour studies, and to facilitate retrieval of this information, the briefs for these studies need to be amended so that all future studies provide data that can be directly incorporated into a council's rates data base. Where there are existing studies, the information for every property needs to be extracted in a consistent and reliable manner and this process should be properly documented.

6.2 Initial Community Reaction to the Proposal

As part of a number of recent floodplain management studies, various flood affected communities have been surveyed to ascertain their opinions concerning the proposal described above (or a very similar proposal). The results are presented in References 4 to 8 and summarised in Table 2 below.

TABLE 2: — COMMUNITY REACTION TO FLOOD CERTIFICATES PROPOSAL

Floodplain Community	Numbers Surveyed	Numbers Responding	Response Rate in Favour of Flood Certificates*
Blacktown	462	125 (27%)	62%
Cabramatta Creek, Liverpool	3080	617 (20%)	71%
Molong	180	73 (41%)	38%
Narrabri	2450	620(26%)	65%
North Wentworthville	429	125 (29%)	64%
Scone	870	280(32%)	45%
Boundary Creek, Strathfield	311	74 (24%)	62%

* for all studies the response rate of those opposed to flood certificates was very low, typically 5%–10%, with the remainder of respondents not expressing a view.

The results of the survey indicate that there is a very high level of support for flood certificates amongst existing residents and owners within floodplains. It would be expected that within the spectrum of persons who require flood information, the existing home owner (as opposed to the prospective developer or home purchaser) would be the least likely to want such a certificate due to the perceived implications on land values.

In addition, in nearly all cases, the use of flood certificates was one of the two or three most

highly favoured floodplain management options. It would be fair to conclude from the surveys that a very high proportion of people who live in a floodplain, want to be told the true extent of the flood problem that they have to live with and see flood certificates as a means to do this.

6.3 The Advantages

, the community will be made aware of existing flood risks which are known to council;
, flood level data will be released in a standardised and uniform manner;
, in the opinion of the authors, it will provide council with an opportunity to discharge both its legal and moral obligations; and
, community pressure may emerge for additional flood mitigation funding from state and federal government.

6.4 The Disadvantages

, where people are currently unaware, or not sufficiently aware of their flood problem, council may be a herald of bad news and may be subject to the 'blame the messenger' syndrome. It may take some time for this negative reaction to die down ;
, by releasing the information, pressure may be put on a council to fix problems for which funding is not available. The performance of a council may therefore be questioned;
, where the best available information is not released, or incorrectly reproduced on the flood certificate, liability claims will arise; and
, once the information is released, council will have a further responsibility to ensure it is kept up to date if the flood hazard is revised (eg if a new study is prepared)

7. CONCLUSION

There are distinct groups within the community which are legally and morally obliged to receive meaningful flood information from councils. Existing home owners may have a natural curiosity to be aware of the flood risks and a need to be prepared "just in case." Prospective home purchasers should be able to make an informed decision about where they are to live. Impending developers need to be fully informed about constraints that may apply to the development and eventual sale of property.

At present there are limited mechanisms used by councils to provide flood information, with the use of S149 certificates being the most prevalent. However from the survey reported in this paper and the experience of the authors, it is concluded that the communication of flood risks is, in the main, unsuccessfully executed. This is largely due to mechanisms and procedures currently employed by councils, and it is contended that flood certificates as described within this paper would be substantially more successful.

While there are conspicuous disadvantages in issuing flood certificates, these are mostly related to wrongly perceived political concerns, and are strongly out weighed by the advantages. It could be said that the ability of persons to make fully informed decisions where flood risks are relevant is more important than the development of flood policies. However for councils not to aim at achieving either in a conscientious manner, is unacceptable.

8. REFERENCES

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