

**HAWKESBURY ENVIRONMENT NETWORK [HEN] SUBMISSION TO HAWKESBURY CITY
COUNCIL**

REDBANK PLANNING PROPOSAL LEP11-002/11

As exhibited from July to August 14th

ENVIRONMENTAL GROUNDS



HEN

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Evaluation of Redbank Creek Catchment]

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Background

Consideration given to the impacts of this proposal on environmental grounds has been drawn up on the following bases:

- 1. HCC statements as shown on the website:** The objectives of the planning proposal are to:
 - Rezone the land from RU4 Primary Production Small Lots and RU1 Primary Production to a range of urban uses (R2 Low Density Residential, R3 Medium Density Residential, R5 Large Lot Residential and B1 Neighbourhood Centre) as well as recreation and environmental uses (RE1 Public Recreation) to accommodate predominantly residential development on the site.
 - Meet increasing demand for additional housing supply and choices with the addition of approximately 1,400 dwellings.
 - Provide development on land that will not significantly impact upon environmentally sensitive land.
 - Provide the opportunity for the protection and adaptive re-use of significant heritage fabric.
 - Create no public infrastructure costs.
 - Contribute to achieving important objectives and directions in Government planning strategies and policies by providing future growth in the North West Subregion.
- 2. Study of the body of the proposal on exhibition, which included the following exhibited documents in some detail:**
 - HCC Planning Proposal - June 2013 LEP11-002/11
 - JBA LEP Planning Proposal- Redbank at North Richmond 15th May 2013
 - Appendices:
 - A: Preliminary Concept Plan and Indicative Layout Plans

- **N:** Riparian Assessment
- **O:** Environmental Constraints and Benefits Analysis and preliminary Seven Part Test.
- **S:** Stormwater Management Strategy

3. Consideration of the tenets of Ecologically Sustainable Development [ESD] internationally recognised in the 1992 Rio Declaration as:

- The integration of environmental considerations and development objectives
- The principle of Intergenerational Equity
- The precautionary principle
- Biodiversity and ecological integrity as a fundamental consideration
- Improved valuation, pricing and incentive mechanisms (including the polluter pays principle).

4. NSW planning laws now found to have breaches which allow overriding of heritage and environmental protection and the community's democratic right to review. These laws are to be introduced to Parliament next month. ("Top official admits errors over draft planning laws", SMH August 13).

Introduction:

The **Hawkesbury Environment Network (HEN)** is a non-government, not-for-profit network of affiliated groups and individuals for environmental information, advocacy and action in the Hawkesbury region. Representative members come from several groups: bird watchers, streamwatchers, native fish conservationists, ecologists, bushcare and landcare groups. HEN began an education and engagement program called **Redbank Recovery** in 2012 which aimed to inform and engage landowners and interested residents along the Creek to become aware of its natural values. Water testing has begun through Streamwatch, now administered by the Australian Museum. A Bushcare program to assist riparian management in the Council reserves along the Creek (Susella and Peel Park) and educate landholders in looking after their riparian buffers was also started in 2012. HEN thanks Marty Gauci, Bushcare Officer at Council, for his dedication towards this program, despite rather poor local participation.

Sustainable living within the context of looking after our environment and natural resources of this area of greater western Sydney is crucial to managing it for the long-term future.

It is therefore a first point of challenge that loss of important assets such as agricultural lands, riparian systems and bushland must automatically make way or be fundamentally and permanently altered for housing in such a dramatic change to the existing landscape. This is urbanisation on an unprecedented scale for our area which will primarily benefit a developer, not benefit the existing community, nor even the future community. It is a wedge being driven into what is and should be a long-standing area of rural and bushland properties.

The development attempts to put up examples of strategies which can seek to minimise some of the impacts eg best practice water management in the form of rain gardens; conservation of Critically Endangered Ecosystems such as Cumberland Plain Woodland through Vegetation Management Plans; retention of a Preferred Riparian Corridor Network for the Creek and its tributaries.

However good and sound these strategies appear on paper, they are simply that at this stage. A housing estate of 1400 homes in this area will irreversibly affect the way in which the existing fauna can survive, breed, move and interact with their environment. The number of houses, people, vehicles, roads and connecting travel ways will fragment this environment. This is not a static situation as laid out on paper, but a new social dynamic. The corridors between bushland within and outside this site, and the Redbank Creek and its riparian and aquatic systems are so far much less disrupted under present status, thus allowing genetic diversity within both plant and animal populations. The greater concentration of population around the Redbank Creek in its lowland area will lead to greater amounts of suspended solids in its waterway, affecting its temperature, light penetration, aquatic food webs and leading to losses of native fish. Pollution by oils and grease from the extra roadways, and litter from the usual sources will increase danger to fauna such as water-dependent organisms eg birds, crustaceans, and mammals.

There is no study which realistically can demonstrate the increase of beneficial effects on retained bushland of value in any housing estate. Even in larger lots such as R5 zoning, clearing for amenity, firewood, woody weed removal, or extra room to graze livestock or drive a bike is seen as a right. The misinterpretation of the value of bushland as isolated trees and canopy is also a problem in this context. CPW's greatest diversity lies in its groundlayer of grasses, forbs and herbs, not in its tree or shrub layer. All layers work together in providing the basis for its ecosystem resilience. Loss of connectivity through fragmentation is the greatest ecological impact of this proposal.

Even in socially sustainable principles, this is creation of what is an extra urban density area adjacent to the existing North Richmond urban zone, without considering issues such as the need to reduce travel, obtain locally grown food, and become more resilient in the face of climate change. The use of water recycling is at least a step in that direction. However, there could be community gardens, use of native plants and reduction of areas of lawn, passive energy housing styles and maximising layouts to create community hubs.

Main Content of Submission:

1. Redbank Creek and Floodplain Development Effects

Redbank Creek arises in the watersheds of Kurrajong, Grose Vale and Kurmond; a catchment of approximately 27km², (approximately 250m above sea level to the Hawkesbury River). Its principal land use consists of agricultural activities such as grazing and rural residential with agriculture. Consistent with the scale of landuse, the greater volumes of runoff occur with grazing and rural residential landuse, however intensive animal production, services, and urban residential areas have proportionally higher runoff per unit area.

(Ref. A Runoff Evaluation of Redbank Creek Catchment. Prof B.Simmons and Mr H. Evans)
The area around Nth Richmond until 1900s was used for grazing and vegetable growing. Water quality was high and the Creek was used for drinking and swimming.

In 1982, housing along the floodplain section of the Creek in Nth Richmond was begun. Properties were developed off William and Elizabeth Streets, Pecks Road and Susella Crescent which had no or inadequate buffering between them and the Creek. The Hawkesbury Council Stormwater map shows drainage into the creek directly off Williams and Elizabeth Sts, Bradley Rd, Susella Cr, Merrick Place and O'Dea Place. Each drain appears to have little in the way of any GPT fitting and was observed in that state in the first two named streets (William and Elizabeth). Subsequently, in the riparian zones of all of these sections, vegetation has become highly weed infested; bank damage is created by uncontrolled stormwater down the drains, as well as by flooding and random access such as bikes; and the bank areas are being opportunistically developed by individual land owners for sheds, clotheslines or extensions of their gardens, with dumped garden refuse leading to high nutrients and weed growth. Pollution levels within the Creek at this area are being studied through Streamwatch tests and some University student research (2013).

When the later Kemsley Downs development was begun in approximately 1987, a new pipeline was put in place to drain into the Creek at Peel Park, taking runoff from Arthur Phillip Drive to Pecks Rd, and streets between.

There is a body of evidence on record about massive flooding, eroded backyards, and loss of property bordering the Creek during the period from 1982 to 1997. Merrick Place in particular has a situation where a gabion structure was erected to prevent further loss, but has instead shifted the impact sideways. In 1987 Council considered a flood levee along the whole length of the Creek from Merrick Place to Bells Line of Rd. This idea was abandoned as economically unviable. Nothing was done, and the problem continues with property owners in Susella Crescent recently stating a loss of 12 feet of backyard. In Merrick Place, a property owner frequently reports the change in the level of turbidity of the Creek flowing through his backyard after storm events.

From all of the above, it can be seen that this system is already at capacity; both recognition that the Creek does flood, has become increasingly subject to extra stormwater, nutrient inputs and pollution, and is subject to erosion due to its marked changes in course and increased flows during storm events.

As Hawkesbury Council is the management authority for this area, close scrutiny of relevant studies and documents about flood and drainage management is required.

It appears from interpretation of the Stormwater Management Strategy document (Appendix S), that there is an outstanding report mentioned as a Flood Study under review by Council. (Mentioned as J. Wyndham Prince Pty Ltd (2011)- North Richmond Township – Flood Study , as Ref 9). Discussions with HCC officials indicate that this is in fact a Stormwater Management document which was started well before this development was mooted, in order to examine problems within the Nth Richmond drainage system. It is said to be separate from what is happening upstream and therefore not on exhibition. However, it is widely known that Nth Richmond lies within the floodplain and has longstanding problems of drainage into two points on Redbank Creek: the main drain into an easement through Peel Park (referred to as line 2), and a second line (1) into an unnamed tributary on Bells Line of Rd, which goes between Michael St and Bells Line of Rd, beneath houses and through an open swale. Flooding has been a major issue for many householders along line 1. In fact Council should have sorted the problem years ago, but instead allowed further additions to stormwater in Kemsley Downs estate development in the late 1980s. How this earlier document can be said to be irrelevant to the new planning proposal in this major problem of drainage is inexplicable. It should therefore be on exhibition. It has been stated in a file note from Council dated 24th January 2003, that “line 1 is unlikely to provide an acceptable standard of protection from larger storms”; and that line 2 from Kemsley Downs estate “will marginally reduce the effect of low to moderate rainfall events. However, during high duration storms, local flooding could still be expected for the full length at any time”. A previous file note from Council dated 18th July 2001 states that “no hydraulic modelling has been undertaken over the Redbank Creek Catchment”, ...and because of uncertainty it concludes that “flooding of development in Nth Richmond adjacent to the lower reaches of Redbank Creek could occur at any time”.

The Stormwater Management Strategy is merely that...it still has not undertaken a complete hydrological study of the Creek, and opts instead to state that detention basins will delay discharge during storms and floods to limit peaks and velocities that may lead

to scouring, siltation and fauna impacts. Pipe diversions into the creek at Peel Park are another measure to counter damage via line 1. However, evidence from resident reports this year during the development being undertaken on the Seniors development site have indicated that storm events disrupted the constructed detention basin, and flooding caused damage to some properties in Michael St. (one was so badly affected that furniture had to be moved into a container on the lawn). As this was a clear breach of the POEO Act, it will have no doubt been recorded into Council or EPA record systems. Therefore the main issues are restriction of post development flows to pre-development levels . How this can work to reduce likelihood of flooding outside this new development is certainly beyond current information.

2. Existing condition of site and links to district

The subject site has been carefully documented from scrutiny of the various studies (AMBS, GHD, Conservation, Indigenous reports etc).

Its ecosystem, vegetation communities and riparian system are documented in sufficient detail to make comment about values and future management.

However, there is a need to consider the site within the context of its position in the district of Grose Vale and the Hawkesbury River, as well as neighbouring reserves and National Parks.

The Reserves and closest distance include Blue Mountains National Park (4km), Navua Reserve(2.5km), Yarramundi Reserve (2.7km), Peel Park (contiguous) and Susella Reserve (0.2km). Hawkesbury River at the furthest end where freshwater from Redbank drains into it is just over 3km, and the Grose River distance at Navua Reserve is 2.5km. Vegetation mapping undertaken by NPWS 2002 shown on AMBS Ecological Constraints Study 2006 indicates high quality vegetation with >10% canopy cover of four EECs within and /or adjacent to the site. [Shown in diagram below, page 9].

All of the external areas contribute to support for the existing biodiversity and corridor potential for the site. Fauna and flora desktop surveys in the studies undertaken for the development were usually assuming a 5-10 km radius, then ground-truthed. Hence the above-mentioned details certainly have provided much informative data about species potential for the site; and quite possibly the limited details and survey extent are at risk of under-representing the site's biodiversity, especially in regard to migratory, more mobile, or flying species of fauna.

In this respect, it is an appalling situation that assumptions have been made to develop a bridge and access across the River at Navua Reserve and Yarramundi Reserve without any consideration for their status as reserves.

3. Flora and Fauna Records

In section 6.1.1 of the AMBS Ecological Constraints Report 2006, it states that “The study site in general does not provide optimal habitat for threatened species in the locality. The ongoing agricultural use of the land has significantly degraded all potential high quality flora and fauna habitat on the site. The study site could provide supplementary habitat for the more mobile threatened species such as birds and bats inhabiting the surrounding national parks and wilderness areas. It is also possible, although unlikely, that the habitat on site could support

threatened frogs and invertebrates.” Nevertheless, it identified nineteen species of threatened fauna listed in the schedules of the TSC Act recorded on the DEC Atlas of Wildlife database within a 5km radius of the study site, and six species of threatened flora within that radius.

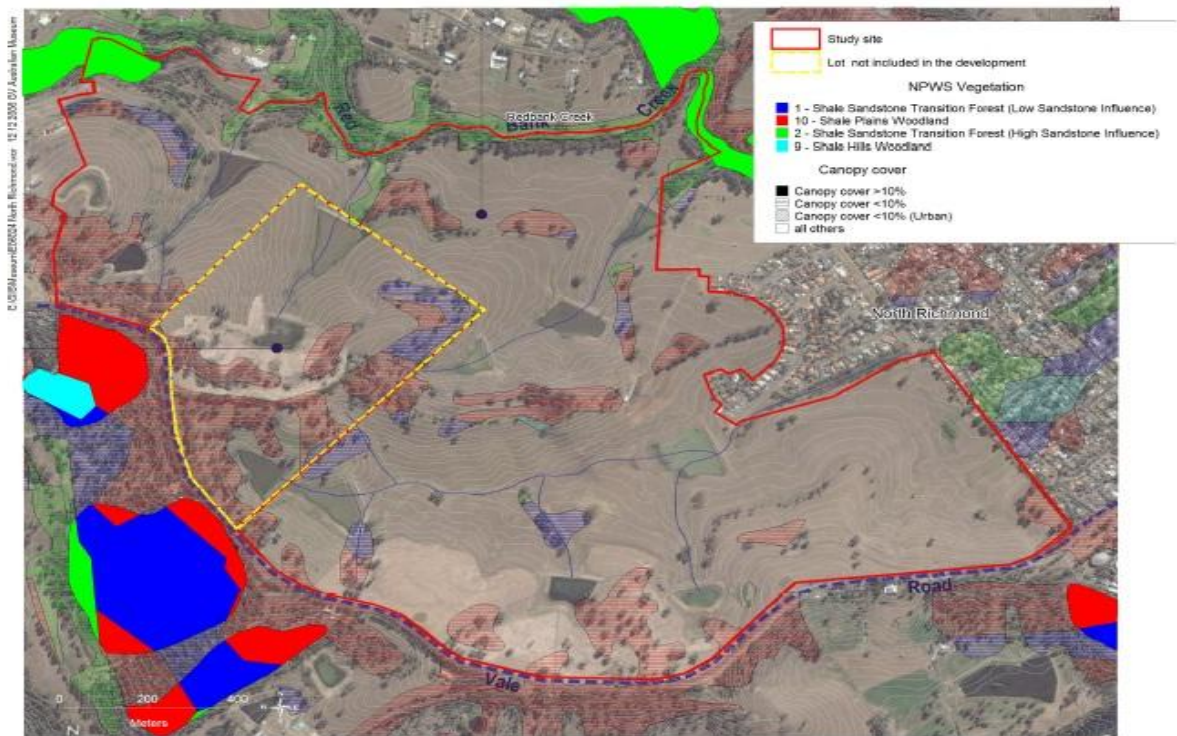


Figure 6 Endangered Ecological Communities on the study site and surrounds as mapped by NPWS (2002)

These lists are created in order to look at constraints to development under legislation protecting threatened species (ie TSC Act and EPBC Act), but in reality the wider focus should be on protection of all native flora and fauna species on the site as support for the functioning of the whole ecosystem. The detailed lists produced by site surveys in the GHD Constraints report (2009) Appendix O, are stated to be preliminary only. A much more detailed analysis is needed well before approval of this plan. At the stage of a DA an ecological impact assessment is already too late. This comment is based on reports of fauna on and near the site which have not been listed, but were observed by experienced wildlife specialists. Eg Platypus are recorded from Redbank Creek within the subject site in 2011-12; Atlas of Living Australia records do not show any Platypus inside the site, but one is recorded from Navua Reserve on the Hawkesbury River confluence with the Grose River. A full list of 108 records of mammal species is shown in the table below and includes 31 species, including koala.

MAMMAL RECORDS: Data from Atlas of Living Australia <http://www.ala.org.au/species-by-location/> for 5km radius of 108 Grose Vale Rd, Nth Richmond. Accessed 14/08/2013.

SCIENTIFIC NAME	VERNACULAR NAME	NO.
Acrobates pygmaeus (Shaw, 1794)	Feathertail Glider	1
Chalinolobus dwyeri	Large-eared Pied Bat	1
Chalinolobus gouldii	Gould's Wattled Bat	12
Falsistrellus tasmaniensis	Eastern False Pipistrelle	2
Macropus giganteus	Eastern Grey Kangaroo	12
Macropus rufogriseus	Red-necked Wallaby	1
Miniopterus australis	Little Bentwing-bat	1
Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	4
Mormopterus "Species 2"	Undescribed Freetail Bat	3
Mormopterus norfolkensis	Eastern Freetail-bat	10
Mormopterus planiceps	Little Mastiff-bat	2
Myotis macropus	Southern Myotis	7
Nyctophilus geoffroyi	Lesser Long-eared Bat	3
Nyctophilus sp.	Long-eared bat	3
Ornithorhynchus anatinus	Platypus	1
Perameles nasuta	Long-nosed Bandicoot	1
Petaurus breviceps	Sugar Glider	13
Petaurus norfolcensis	Squirrel Glider	13
Petrogale penicillata (Gray, 1825)	Brush-tailed Rock-wallaby	1
Phascolarctos cinereus	Koala	2
Pseudocheirus peregrinus	Common Ringtail Possum	11
Pteropus poliocephalus	Grey-headed Flying-fox	13
Scoteanax rueppellii	Greater Broad-nosed Bat	7
Tachyglossus aculeatus	Short-beaked Echidna	2
Tadarida australis	White-striped Freetail-bat	8
Trichosurus vulpecula	Common Brushtail Possum	17
Vespadelus darlingtoni	Large Forest Bat	1
Vespadelus pumilus	Eastern Forest Bat	1
Vespadelus regulus	Southern Forest Bat	1
Vespadelus vulturnus	Little Forest Bat	6
Wallabia bicolor	Swamp Wallaby	3

A similar analysis could be carried out as a desktop review of all flora and fauna records. Similar surveys of native fish and other aquatic species should be hastened to provide baseline data for the state of the Creek system and its health.

Mammals in particular are shown here as it is already agreed that Redbank Creek itself and its riparian system is designated as Core Habitat and the CPW site as Support for Core. It would be a great shame to overlook such diversity within the context of management under VMPs. The question arises, 'Manage for What?' ...and the answer can

include education of the children (and families) whose lives might be enriched within the context of living in or near this development.

4. Effects of overdevelopment on the existing environment

Lack of detail as yet has raised concerns about excessively small lot sizes, houses maximising footprint and lack of yards, narrow roads and lack of adequate space for footpaths and walking areas; all in the quest for maximising lot yields. Such disastrous developments have already popped up in areas around Western Sydney including the Jordan Springs near Penrith, which took over precious Critically Endangered Cumberland Plain Woodland and decimated it. At this stage of exhibition, it is outside HEN ambit to undertake an analysis of lot yield and how housing fits within the landscape. However, our experience with what happens elsewhere in western Sydney gives us no great optimism that this will be different here, especially under current planning laws, and especially under lack of proper representation by local government of our concerns. We can only rely on what can be seen from maps showing some degree of RE1 corridors and buffer zones along streams and Redbank Creek. As stated most frequently in this submission, fragmentation of the ecosystems that still exist is a most dire concern, as it will inevitably lead to loss of any chance for a modern development integrated within a framework that supports its existing natural resource base, and agricultural potential for local food production. RE1 is not Environment Protection, which would be a better zoning category for the areas shown, such as trunk corridors and the CPW remnants. The development relies a great deal on interpretation by our community of zoning maps and strategy documents. How can community control, demand and expect commitment towards upholding best practice; by the development group (or whoever replaces it in the final stages); by relevant Council agencies such as land management and planning; and by State Government environmental management agencies?

5. Loss of agricultural land

There are many who will judge the irreversible loss of the Yeoman's Keyline heritage of this site as one of the worst aspects of this development. It is not HEN's case to take up except in looking at the potential which can provide opportunities for the future. Consideration of use of the land to provide space for community use to grow vegetables, fruit orchards and small-holdings of poultry would create a healthy lifestyle and sustainable living for many households. The condition of the soil left by Keyline management is known to be good, and ample water from dams can also be a benefit. Passing on this knowledge to future generations through the links with the University of Western Sydney and other educational institutions may well provide a buffer in future times of climate uncertainty.

6. Conclusions and summary

HEN opposes the current planning proposal as exhibited on the following grounds:

1. Huge increase in population pressure on the Redbank Creek Catchment.
 2. Permanent deterioration of aquatic ecosystems of Redbank Creek.
 3. Irreversible fragmentation of Endangered Ecological Communities.
 4. Increased impermeable surfaces leading to increased stormwater on a floodplain urban area already under pressure at Nth Richmond.
 5. Lack of support and resources for natural resource management by Council and the local community to underpin protection of the ecosystems and ecosystem functions.
 6. Overdevelopment of the site by maximising lot yield at the expense of maintaining ecosystem functions and corridors.
 7. Increased stress effects due to stormwater on existing infrastructure such as drainage which damages the Creek system and pollutes its water.
 8. Irreversible fragmentation of vegetation communities and agricultural assets.
 9. The proposition of development of transport corridors utilising (and alienating) public recreation and natural reserve areas on Hawkesbury River.
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