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Law and governance for the biodiverse city

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ABSTRACT

Unsustainable urban development and the continuing loss of biodiversity are officially acknowledged as two of Australia's most pressing environmental challenges. Under existing Australian statutory and land use decision-making frameworks, a problem exists in the protection of biodiversity, even though it is legislatively prescribed as being a fundamental consideration. This paper suggests that Australia's existing environmental laws and regulations are inadequate to protect biodiversity when it comes in direct competition with determined urban expansion. The research crucible of Gosford on the NSW Central Coast is used, as it is and has long been one of the major growth corridors of Australia's most populace city, Sydney, and yet it holds important biodiversity and natural systems. By critically examining Australia's legal, economic and social heritage paradigms, this paper demonstrates that change is needed in planning, assessment and review systems if Australia is to meet the modern demands of Ecologically Sustainable Development in the urban context.

Key Words: Biodiversity, governance, urban development

INTRODUCTION

It is not a question of fact, nor is it a secret, nor is it a recent discovery, that human settlement patterns of the past 230 years have had a devastating impact on Australian biodiversity and continue to do so.

Currently an Australian House of Representatives Inquiry is investigating 'the environmental and social impacts of sprawling urban development.'[1] Until very recently, the NSW Government National Parks and Wildlife Service, on its website, acknowledged the extent of Australian species extinction under the heading 'Our Terrible Record'. Indeed, this fatal impact was foretold, even within 50 years of English settlement, by none other than the father of biological science, Charles Darwin, during his 1836 visit to the Sydney bioregion:

> 'A few years since this country abounded with wild animals; but now the emu is banished to a long distance, and the kangaroo is become scarce… It may be long before these animals are altogether exterminated, but their doom is fixed.'[2]

[1] House of Representatives Standing Committee on Environment and Heritage, *Sustainable Cities 2025:Discussion Paper* (available at < www.aph.gov.au/house/committee/environ > 3/11/2003) at 3 (hereinafter *Sustainable Cities)*

[2] Charles Darwin, *Voyage of the Beagle (1909)* Chapter XIX Australia, Entry for January 18, 1836.

Darwin's doom saying may well be viewed as pragmatic, based, as it was, on his own global observations, of the cataclysmic effect on native systems wrought by the Europeans.[3] This being said, however, Australia, as a modern nation, equipped with the knowledge of the necessity of biodiversity for eco-planetary survival, has the opportunity to meet the Darwinian challenge to evolve into a sustainable nation. While this will involve significant changes to our traditional views and laws pertaining to our land and resource use, we will ignore this challenge at our own peril.

Given that Australia is predominantly a population of cities, this paper places itself in an urban context. As we have already established a sense of place with Charles Darwin, we will remain in the Sydney region. Being, as it is, Australia's largest and most populace city, Sydney serves as a potent example of the urban sprawl, which is characteristic of the traditional settlement patterns now under official review.[4] It is from here we will pose the central question: Are Australia's existing environmental laws adequate to manage Sydney's urban expansion within the confines of Australia's international sustainability[5] obligations? While a definitive answer is the focus of ongoing research, this paper explores the complex context in which this important question must be asked.

SYDNEY: A BOTANICAL STORY

One of the cruel ironies in Sydney's geographical nomenclature is Botany Bay.[6] However, the name is symbolic of the Australian ecological story since European settlement.

In 1770, it was the site of such incredulous excitement, on the part of the naturalists on board the exploring *HMS Endeavour*, that Captain James Cook named the inlet Botany Bay and its two headlands, Capes Banks and Solander, after the ship's two botanists.

[3] Ibid, 'Wherever the European has trod death seems to pursue the aboriginal'.
[4] *Sustainable Cities* above n1.
[5] Sustainability is generally defined as: 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' – as per *Our Common Future*, World Commission on Environment and Development, (Australian ed, 1990) at 87.

The floristic abundance of the area inspired Banks and Solander to go on a collecting spree that would culminate in one of the greatest botanical collections ever made. From the shoreline wetlands to the inland eucalyptus forests, their eight days in Botany Bay saw more specimens collected than from any other location they'd previously explored and Banks collected birds, animals and sea life from the bay.

Today, only one per cent of the remnant vegetation remains in the Botany Local Government Area.[7] There are no recorded native mammals in the area and the wetlands are under stress from urban and industrial runoff.[8]

The paradox of this ecological transformation is that Banks, the Botany Bay biodiversity enthusiast, was the catalyst for its ultimate depletion. It was he who championed Botany Bay as the site of England's first settlement on Australian soil.

The following statement, amongst others, from his official recommendation to the House of Commons, clearly demonstrates his view that the natural systems of the Sydney bioregion were ripe for European exploitation: 'There was abundance of timber and fuel, sufficient for any number of buildings, which might be found necessary.' [9]

No doubt, the number of buildings, which *have* been found to be necessary in the human settlement of Sydney, is beyond Bank's expectations. Yet, his testimony and the views expressed in his journals about the land and its inhabitants underscore the English intention to sovereignty over and ownership of the Great Southern Land.

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[6] Botany Bay is in the Sydney metropolitan region, south of the Sydney Central Business District. Today, it is the site of the Sydney Airport, the Kurnell Oil Refinery and extensive residential, commercial, industrial and recreational facilities development.

[7] Nature Conservation Council NSW, *Urban Bushland Program, Botany Local Government Area* (Available at <http://www.nccnsw.org.au/bushland/reference/ubut/BOTAN> (10th Nov.2003*)*

[8] Ibid. Additional information is available from the *Botany Bay State of the Environment Report 2001*, <http://www.botanybay.nsw.gov.au/pdf/health/january2003/SoE2001.pdf> (10th Nov.2003)and *State of the Bay Report* < http://www.users.bigpond.com/garrysmith/index.htm> (10th Nov. 2003)

[9] Joseph Banks, cited Great Britain.Parliament.House of Commons *Journal 1628-1799.* In his testimony to a House of Commons committee, Banks recommended Botany Bay as the site of England's first penal colony in New South Wales.

A QUESTION OF ENTITLEMENT

When the First Fleet arrived in 1788, they brought with them much more than convicts, soldiers, camp followers and supplies. They brought with them the English law. This was because Australia, in a legal sense, was settled, rather than conquered or ceded. This distinction between the modes of occupation is usually said to reflect the then contemporary international law for a country to acquire new territory. It also had the immediate effect of introducing all the applicable common law, equity and statute law, according to the Blackstone formulation, which states, in part:

> it hath been held that if an uninhabited country be discovered and planted by English subjects all the English laws then in being, which are the birthright of every English subject, are immediately there in force.[10]

The British colonists' claim to have settled a territory that was 'practically unoccupied'[11] was based on the contemporary European conception of property ownership, which held that people could only be considered to *own* land if they had cultivated it for agricultural or other 'civilised' purposes. The aboriginals, being mainly nomadic hunters and gatherers, were, under the European construct of property ownership, [12] deemed by the British to have no property rights to the land.

The validity of such a foundation to assert the Crown's sovereignty and its right to radical title in the land has been the issue of much national debate and testing in the courts[13] over recent decades, most notably *Mabo v Queensland (No 2)* (1992) 175 CLR1(hereinafter *Mabo*).[14] However, in *Mabo*, the High Court:

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[10]Sir William Blackstone, *Commentaries on the Laws of England* (11th ed, 1791) Vol 1 at 108.

[11] One of the various definitions of the term *terra nullius.* Macquarie Dictionary*,* 2001, cites Professor Alan Frost (1980): 'According to international notions, NSW was terra nullius, to be occupied on the basis of first discovery, without purchase from the indigenous inhabitants.'

[12] See generally, Sir William Blackstone, above n10, Id, Vol 2, Chapter 1, in which he theorises about the evolution of occupancy and possession of *res nullius* (no man's goods) and proprietary rights furthering the long held European legal institution that *everything ought to have an owner.*

[13]*Milirrpum v Nabalco Pty Ltd* (1971) 17 FLR 141, Blackburn J at 249:'the categorization of New South Wales as a colony acquired by settlement or peaceful occupation, as being inhabited only by uncivilized people, is a matter of law.'

[14] *Mabo v Queensland (No 2)* (1992) 175 CLR1 at 45 Brennan J : 'It was only by fastening on the notion that a settled colony was terra nullius that it was possible to predicate of the Crown the acquisition of ownership of land already occupied by indigenous inhabitants. It was only on the hypothesis that there was nobody in occupation that it could be said that the Crown was the owner because there was no other.... the rejection of the notion of terra nullius clears away the fictional impediment to the recognition of indigenous rights and interests in colonial land.'

> did not question that Australia was a settled colony, or that English law came with the settlers in accordance with Blackstone's formulation. Nor did it question that the radical title to all land in Australia was vested in the Crown (either in right of the Commonwealth or one of the states).[15]

PROPERTY, COMMERCE AND THE COMMON LAW.

To outline the full ambit of Australian property and land law is outside this paper's scope. However, it is important to understand that under the English law inherited by Australia, *use* of land was fundamental to having a property right in it. To this day, in Australia, England and other common law countries, the common law exists:

> principally to protect the private property rights and economic interests of the owners of land and other natural resources. Those who have the best possessory right (and the best of all is ownership) can control access to, exploitation and management of resource.[16]

Under common law, only neighbouring property owners, who enjoy similar rights, can restrict that usage and then only on the grounds that such utilisation is unreasonably interfering with the enjoyment of their property - the three common law property actions being trespass, nuisance and negligence.

Considering the fact that the common law has long been the legal domain for land use decisions, it is timely to discover upon what foundations it is based. Dating back to feudal England, the common law emerged from the mixed inheritance of Anglo-Saxon customary law and the legal imports brought with the Norman conquerors, in 1066. As a means of resolving disputes, facilitating freedom of commerce and of regulating behaviour, the judge-made English common law was characterised by its application throughout the realm, and its considerable regularity, both in substantive rules and procedure. To this day, the common law is dynamic in nature and bound by the doctrine of precedent and court hierarchy.

Having its basis in feudalism, the heritage of the common law as the protector of private rights to property, most notably in land, spans over a thousand years. Its

[15] Catriona Cook, Robin Creyke, Robert Geddes, Ian Holloway, *Laying Down The Law* (5th ed, 2001) at 48.

antiquity stands in stark contrast to the novelty of the modern era concepts of environment protection and sustainable land use, which have been introduced into the Australian legal framework in only the last few decades and mostly in the last ten years.

The common law's role as the facilitator of freedom of commerce is another important consideration. Given that, by the time of Australian settlement, feudalism had given way to the emerging forces of the industrial revolution in England, the guiding economic principle, which arrived with the English, even though in its embryonic form, was the 'free private enterprise system' more commonly known as capitalism. Indeed, twelve years prior to the arrival of the First Fleet, the great economic philosopher, Adam Smith, published his influential *Wealth of Nations,*[17] in 1776, in it advocating free trade and private enterprise whilst opposing state interference. These emerging attitudes, along with others, guided the English and Australian economic, political and social frameworks into what we now know as the Western Capitalist Democracy.

While Australia is now an independent nation, its Federation having being established in 1901 and the Australia Acts in 1986 severing any remaining judicial review ties, the relevance of Australia's English heritage cannot be overstated. These connections have not only been modern Australia's cultural foundation stone, but they continue to inform the prevailing social attitudes and expectations, of significance to this paper, towards land use and environmental law.

SUSTAINABILITY – A QUESTION OF LAW

Most Australian environmental law is created by statute or parliamentary legislation, which, under the constitutional monarchy system of governance,[18] is superior to the common law. This superiority is based upon the fact that democratically elected representatives enact statute law, whereas common law judges, being government appointees, are not answerable to the people. It is in this context that we shall examine how both the statutory and common law systems of governance interact,

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[16]Gerry Bates, *Environmental Law in Australia* (5th ed, 2002) at 20.
[17] Adam Smith, *The Wealth of Nations* (1776).
[18]Defined constitutional principles confine the monarch's powers, thereby giving the parliament supreme political authority with the exclusive right to levy taxes; the executive has powers subordinate

when it comes to land use in the modern era, where Australia has international obligations to fulfil its commitments towards furthering the principles of Ecologically Sustainable Development.[19]

To narrow the field of the exploration, the conservation of biodiversity has been chosen, because it, under Australian legislation, is prescribed as being a fundamental consideration in land use decision-making,[20] yet Australian biodiversity is demonstrably still in decline.[21] Therefore, it is a matter of fact that a problem exists in the protection of biodiversity under existing Australian legislative and land use decision-making frameworks.

Under the Australian federal system of governance, most responsibility for land management, including biodiversity, rests with the States. However, s51 of the Australian Constitution[22] provides the Commonwealth with considerable environmental powers. Indeed, most of Australia's environmental law has resulted from the Commonwealth Government exercising its s51 powers, by signing international treaties, conventions and protocols which collectively enshrine a commitment to ESD. One of these, Agenda 21 (an action plan),[23] requires the Commonwealth Government to prepare State of the Environment Reports, the most recent of which identified the following as three of the six major environmental challenges facing Australia:

- Unsustainable environmental pressures from urban development;
- persistent threats to biodiversity, including land clearing and
- vegetation loss.[24]

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to that of the parliament; the judiciary, while appointed by the government, is free of political interference in the conduct of its work.

[19] Ecologically Sustainable Development (hereinafter, in text, ESD).

[20] *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) *s3A (d)*: 'the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making;'.

[21] see generally, *Australian Terrestrial Biodiversity Assessment 2002,* National Land and Water Resources Audit, c/- Land and Water Australia on behalf of the Commonwealth of Australia, 2002.

[22] *The Commonwealth of Australia Constitution Act* 1900.

[23] Agenda 21(an action plan) arose from the first Earth Summit, which was called by the United Nations Conference on the Environment and Development (UNCED), and held in Rio de Janeiro, Brazil in 1992.

[24]The Hon David Kemp, Federal Minister for the Environment and Heritage*, Speech*, March 2002, at the Launch of *Australia State of the Environment Report 2001*(hereinafter *SoE 2001*).

The Commonwealth Government cites the enactment of the *Environment Protection and Biodiversity Conservation Act* 1999 (Cth) (hereinafter *EPBC Act)*, as one of its key responses to these challenges.[25] A commitment to the principles of ESD, is also contained in State legislation[26], which, in turn, guides State and Local Government decision-making, as well as civil and criminal enforcement. However, when it is placed in the Australian system of governance, ESD, as a legal concept, is problematic:

> it [the legal definition of ESD] tends to treat sustainability as part of a procedure for, rather than a focus or an outcome of, decision making; there tends to be little accountability for pursuing or achieving sustainable outcomes; there are few requirements in legislation for actual monitoring the sustainability of outcomes.[27]

It is, therefore, to be expected that ESD's problematic legal status will cause tensions when its principles are tested in the common law courts, guided as they are by ancient doctrines and jurisprudence. The Honourable Justice Paul Stein (as he then was) has illuminated the nature of the problem for the judicial mind:

> …the inclusion of the principles [of ESD] in Australian legislation has been largely confined to objectives of statutes or agencies without any real guidance to decision-makers as to whether and how to apply the core principles or what weight to give them. Moreover, some of the principles contain vague statements, some might call them aspirations, as well ambiguities, inconsistencies and uncertainties. Difficulties of interpretation and application are manifest. There is even discussion on whether the principles are merely guiding or whether they are also operational. In these circumstances, who can blame the courts with proceeding, like the precautionary principle, with a degree of caution?[28]

The precautionary principle, the first of the four principles of ESD, states:

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[25] Ibid, The Commonwealth Government responded to the release of the *SoE 2001* citing its having 'put in place some of the key legal and financial frameworks to move policy in right direction' namely: The introduction of the *EPBC Act*; The Natural Heritage Trust legislation and The National Action Plan for salinity and water quality.

[26] The scope of this paper is limited to the state jurisdiction of New South Wales where the following pertinent acts contain a commitment to ESD: *Environmental Planning and Assessment Act* 1979 (NSW) s5(vii); *Threatened Species Conservation Act* 1995 (NSW) s3(a); *Protection of the Environment Administration Act* 1991 (NSW) s6(1)(a), *Local Government Act* 1993 (NSW) s8.

[27] Gerry Bates, *Environmental Law in Australia,* above n16 at 127.

> that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and (ii) an assessment of the risk-weighted consequences of various options,[29]

The fact that published judicial opinion suggests that ESD's questionable legal status, whether its principles are merely guiding or operational, is due to the *vagueness* of statutory direction, indicates that there is an impediment to the implementation and enforcement of Sustainability in Australia. This issue has been acknowledged by *Australia State of the Environment 2001:*

> …the sheer novelty of many ESD issues - their relatively recent arrival on the policy agenda means that there is a lack of defined policy and property rights and responsibilities and a lack of agreed management approaches and policy instruments. These attributes characterise the challenge of biodiversity conservation.[30]

AUSTRALIA'S INTERNATIONAL BIODIVERSITY OBLIGATIONS.

However, Australia, having ratified the Bratislava Convention on Conservation of Biological Diversity,[31] is legally obliged[32] to meet the challenge of biodiversity conservation. Signatories to the CBD are committed to further the three goals of Conservation of Biological Diversity, which are to promote: the conservation of biological diversity; the sustainable use of its components; and a fair and equitable sharing of benefits arising from the use of genetic resources. The fact that Australian biodiversity continues to be depleted is, therefore, a serious legal issue, as well as

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[28]The Hon Paul Stein, 'Are Decision-makers Too Cautious with the Precautionary Principle?' (2000) 17 *EPLJ* 1.
[29] *Protection of the Environment Administration Act* 1991(NSW) s6(1)(a).
[30] Department of the Environment and Heritage, Commonwealth of Australia, *SoE 2001, (Biodiversity Theme Report)* (Melbourne: CSIRO Publishing, 2001).
[31] The Convention for Bological Diversity (hereinafter CBD)came into force legally in December 1993.
[32]Gerry Bates, *Environmental Law in Australia* above n16 at 123: 'The status of ESD as an emerging form of customary international law is important to Australia, since the High Court has confirmed that domestic legislation will be interpreted and applied in conformity with international customary law [*Minister for Immigration and Ethnic Affairs v Teho* (1995) 183 CLR 273*; Kartinyeri v Commonwealth* (1998) 72 ALJR 722]'.

being a national and international ecological concern. On a global level, Australia has experienced the worst mammal extinction rate out of the world's seven continents in the last 200 years[33] and, as a nation, it carries an onerous responsibility in terms of Earth's biological systems. It is one of 12 nations that is a major repository of ecological diversity and is the only developed country of that12.[34] (see Figure 1)

[33] National Parks and Wildlife Service, NSW, '*Threatened Species'* <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Threatened+Species> (9th October 2003).
[34] Kath Wellman, 'Building Community Based Resource Management into Contemporary Governance:the Australian Experience' in, *Australia, New Players, Partners and Processes: A Public Sector Without Boundaries* (Canberra, University of Canberra Press, 2001) at 128.

UNITED NATIONS
RIO EARTH SUMMIT 1992

⇩

AUSTRALIA SIGNATORY TO AGENDA 21 ACTION PLAN
&
CONVENTION ON CONSERVATION OF BIOLOGICAL DIVERSITY

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AUSTRALIAN LEGAL SYSTEM

STATUTORY LAW	**COMMON LAW**
NOVEL 'SUSTAINABILITY' Defined in 1987. 'CONVENTION ON CONSERVATION OF BIOLOGICAL DIVERSITY' 1993. ⇩ **COMMONWEALTH** EPBC Act 1999 ⇩ **NSW** - EP&A Act 1979, LEC Act 1979, POE Administration Act 1991, LG Act 1993, TSC Act 1995, POE Operations Act 1997. ⇩ **LOCAL GOVERNMENT** EP&A Act 1979, LG Act 1993.	**ANCIENT** BASED IN FEUDALISM PROTECTION OF PRIVATE RIGHTS TO PROPERTY & FACILITATION OF FREEDOM OF COMMERCE. ⇩ TRESPASS NUISANCE NEGLIGENCE
PROBLEMATIC LEGAL DEFINITION '**VAGUENESS**' OF STATUTORY DIRECTION **LANGUAGE** "GIVE CONSIDERATION TO" "TAKEN INTO ACCOUNT"	**DEFINED BY PRECEDENT** CENTURIES OF PRECEDENT, JUDGE MADE LAW. TESTING DEFINITIONS VIA LITIGATION IS COSTLY

Act Abbreviations: EPBC = *Environment Protection and Biodiversity Conservation Act* 1999 (Clth); EP&A = *Environmental Planning and Assessment Act* 1979 (NSW); LEC = *Land and Environment Court Act* 1979 (NSW); POE Administration = *Protection of the Environment Administration Act* 1991 (NSW); LG = *Local Government Act* 1993 (NSW); TSC = *Threatened Species Conservation Act* 1995 (NSW); POE Operations = *Protection of the Environment Operations Act* 1997 (NSW).

FIGURE 1: SUSTAINABILITY AND LAW. © K.Hodgman (2003).

A developed country is generally considered to be one, which is economically advanced and industrialised. Much of that development, in the Australian context, has come as the direct result of land use. Let us, therefore, look to the legal definition of development contained in the overarching legislation for land use and planning in the jurisdiction of NSW, the *Environment Planning and Assessment Act* 1979 (NSW) (hereinafter *EP&A Act*):

"development" means: (a) the use of land, and (b) the subdivision of land, and (c) the erection of a building, and (d) the carrying out of a work, and (e) the demolition of a building or work, and (f) any other act, matter or thing referred to in section 26 that is controlled by an environmental planning instrument, but does not include any development of a class or description prescribed by the regulations for the purposes of this definition.[35]

Much of the so-defined development in the Sydney region, which is the focus of this paper, has been urban expansion. We have already noted that the Federal Minister for Environment and Heritage, the Hon. Dr David Kemp, has acknowledged that unsustainable urban development is one of Australia's biggest national concerns.[36] The *SoE 2001* is more specific in identifying the problems, amongst them:

- difficulties posed by planning law's traditional respect for existing land uses.
- perceived failure of command and control regulation specifically in the private land context and an attempt to develop economic instruments and community driven mechanisms (e.g. catchment committees).[37]

The identification of such difficulties as impediments to Sustainability is not new. On the contrary, they were at the core of the guiding 'Anticipate and Prevent' Approach detailed in the 1987 publication *Our Common Future,* also known as the Brundtland Report, in which the World Commission on Environment and Development, put the world on notice that a global change of attitude was essential if a sustainable future is to be achieved:

[35] *EP&A Act* s4. The Section 26 referred to outlines the contents of Environmental Planning Instruments, which are, specifically, State Environmental Planning Policies, Regional Environment Plans, Local Environment Plans. Part 3 of the Act outlines the procedures for the making of such instruments.
[36] The Hon David Kemp, *Speech,* above n24.

> Development patterns must be altered to make them more compatible with the preservation of the extremely valuable biological diversity of the planet. Altering economic and land use patterns seems to be the best long-term approach to ensuring the survival of wild species and their ecosystems.[38]

However, altering economic and land use patterns is a monumental task, arguably revolutionary, for a nation like Australia, being as it is, a Western Capitalist Democracy, with an extensive economic, social, political and legal history based in the utilisation of land and its natural resources.

To understand the magnitude of this challenge it is necessary to look at the role of government and the constraints upon it, in the determination of policy and law in this era of the triple bottom line – where, hypothetically, economics, social and environmental considerations are to be *integrated* in the decision making process.

THE TRIPLE BOTTOM LINE

Australia as a developed country in the 21st Century global village is confronting major economic and environmental responsibilities, whilst maintaining social cohesion. These are the challenges of ESD's Triple Bottom Line.

The United Nations Earth Summit of 1992[39] provided some guidance as to how to manage these challenges, in the form of Agenda 21, by developing the notion of 'think globally and act locally.'

By acknowledging that most environmental problems have their foundation in local activities, and local authorities, being the closest governance to the people, Agenda 21 states:

> Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and

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[37] *Australia State of the Environment Report 2001 (Biodiversity Theme Report),* above n30, *'Biodiversity and the Law'.*
[38] WCED, *Our Common Future,* above n5 at 201.
[39] The first Earth Summit held in Rio de Janeiro, Brazil in 1992, above n23.

> regulations…. the participation of local authorities will be a determining factor in fulfilling its [Agenda 21's] objectives.[40]

As has been previously noted, most responsibility for land management rests with the States. Acknowledging the complexity of the Triple Bottom Line, the recently re-elected NSW Government has created a mega-department, the Department of Infrastructure, Planning and Natural Resources (hereinafter *DIPNR*), to oversee land use and natural resource management, with an aim to better link natural resource management and urban development. In announcing *DIPNR*'s formation to the NSW Parliament, the Minister, the Hon. Craig Knowles said:

> It will reduce the number of agencies involved in the decision-making process about land use planning, with further pressure to reduce the often conflicting views within government that cause endless frustration to the community….We want to make it easier for the private sector, for example, to work with government to share their ideas about infrastructure provision….Most importantly, these changes will affect and underpin our efforts to reconcile those difficult and often competing interests of **environmental *needs*** and **social and economic *imperatives***.[41]

Whilst the formation of the new department would appear to be embracing the guiding principles of ESD, it is troubling that at the outset the Minister has placed an imbalance in the weighting given to the three fundamentals. Unless statutory direction is given to the contrary, it is likely that in judicial and administrative consideration, an imperative will be given greater weight than a need.

This echoes the 'double weighting' of social and economic considerations against the environment, which is an often-used drafting tool in the framing of ESD considerations in Australian legislation. For example, the Commonwealth's *EPBC Act*, in s136, directs the Minister to give mandatory consideration to social and economic matters, whereas ESD principles are secondary matters to be 'taken into account'. Legally, this means that ESD is subservient to the social and economic matters in the land-use decision-making process.[42]

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[40] S. Johnson (ed), *The Earth Summit: The United Nations Conference on the Environment and Development* (1993) at 423.
[41]The Hon Craig Knowles, NSW, Legislative Assembly, *Parliamentary Debates* (Hansard), 29th May 2003 Article No.18.[Emphasis added.]
[42]Gerry Bates, *Environmental Law in Australia* above n16 at 128.

This is important, given that the whole concept of ESD is to embrace the environment as an *equal* consideration, as it is fundamental to the earth's capacity for resource renewal, upon which social and economic interests depend.

This concept was acknowledged in the landmark *Intergovernmental Agreement on the Environment* (hereinafter *IGAE*)[43]

> ….it is vital to develop and continue land use programs and co-operative arrangements to achieve sustainable land use and to **conserve and improve Australia's biota,** and soil and water resources which are basic to the maintenance of essential ecological processes and the production of food, fibre and shelter;[44]

The *IGAE* was an important recognition that those who framed the Australian Constitution had not contemplated the magnitude of Australia's environmental problems and that extraordinary governance measures were necessary to meet the modern challenges. The fact that, over a decade after the agreement, environmental considerations are given subservient statutory status to social and economic matters is, therefore, a serious issue.

THREE TIERS OF ENVIRONMENTAL GOVERNANCE

The *IGAE* saw the Commonwealth, all the States and Territories and the Local Government Association of Australia sign off on a cooperative national approach to the environment, which also provided a better definition of the roles of the respective governments in environmental affairs.[45]

Under Australia's federal system of governance, Commonwealth legislation is superior to that of the States. That being said, while most responsibility for environmental issues has been allocated to the States, should one of the triggers of the *EPBC Act* be activated, the Commonwealth legislation will prevail. Likewise, the acsendancy of State over Local Government action follows the same principle.

Under the *IGAE* much of the administration of land use decision-making, particularly within the privately owned land context of NSW, was devolved by statute to the tier of

[43] *The Intergovernmental Agreement on the Environment* , made 1st May 1992[Emphasis added].
[44] *IGAE* available at: < htt://www.ea.gov.au/esd/national/igae > (9th October 2003).
[45] Ibid.

Local Government.[46] Urban planners and the democratically elected local councillors, thus, have the power to produce land use strategies and controls through legislative zoning instruments such as Local Environment Plans and Development Control Plans. These instruments are designed within the overall context of State Environmental Planning Policies and Regional Environment Plans, which are strategic instruments implemented by the NSW Government.

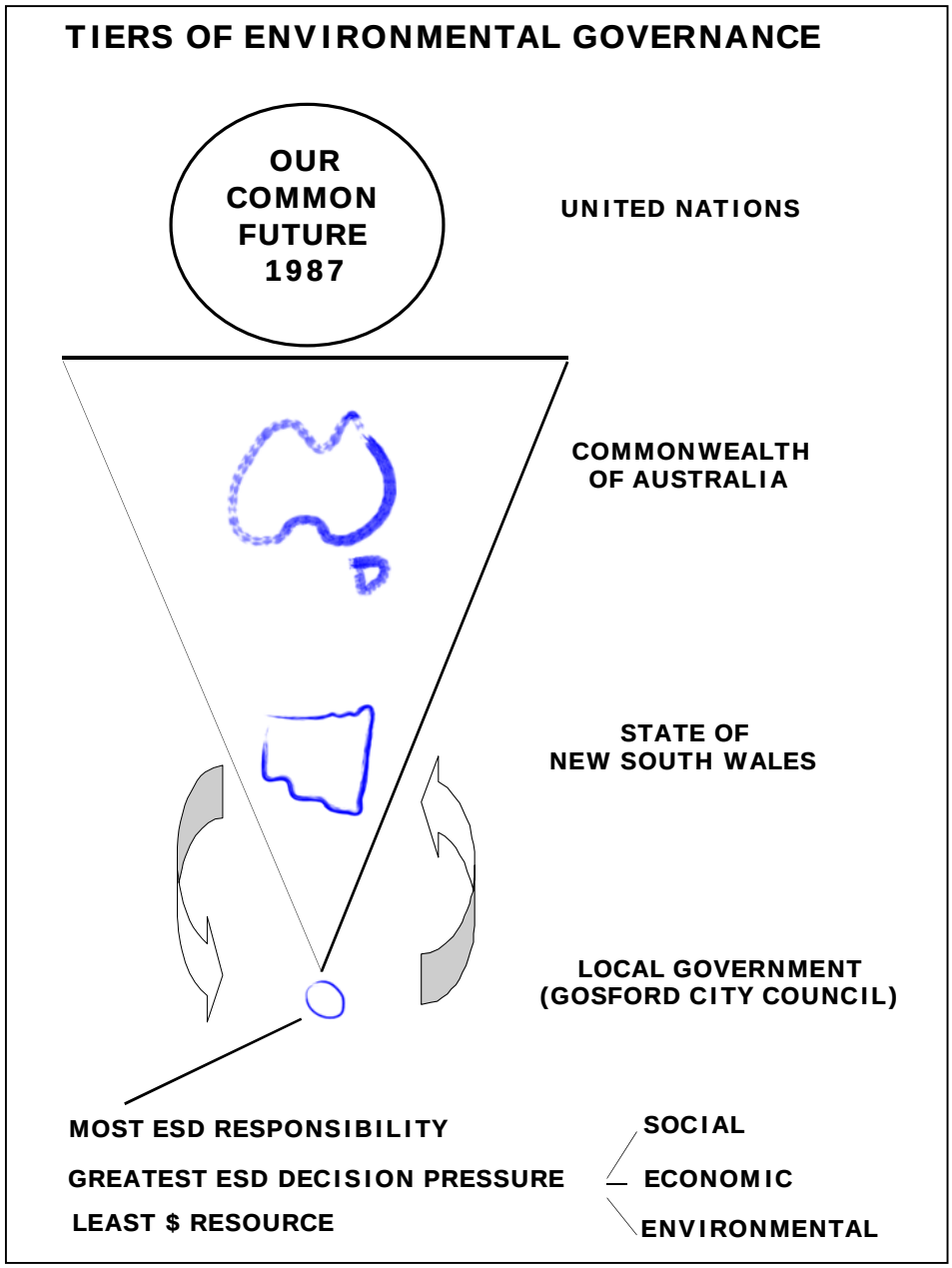
Local Government is also given the responsibility of assessing development applications and enforcing conditions of consent. The overarching legislation in NSW for the control of land use in the urban context is the *EP&A Act*, which was created in tandem with the *Land and Environment Court Act* 1979 (NSW)(See Figure 2).

The specialist Land and Environment Court, which has Supreme Court status, is divided into two decision-making categories, namely merit appeal and judicial review. The latter is where questions of law are tested before a judge, while the former is a de novo hearing of a development application, where the court takes the place of the local council and exercises it discretion.

While a full exploration of the intricacies of NSW planning law and the Land and Environment Court is beyond the scope of this paper, it is noteworthy that there is growing disaffection within NSW Local Government for the merit appeal process. Local councils assert that they, as elected bodies, are entitled to make the final decision on questions affecting their constituents.[47] Another area of contention relates to the strict timeframes under which councils are directed to operate. Councils are given 40 days in which to make a determination on a development application, and 60 days if concurrence of a minister or public authority is required for the proposal. After this period the applicant is given leave to appeal to the Land and Environment Court on the grounds of 'deemed refusal'. This timeframe is of particular relevance to areas such as the NSW Central Coast, which are under increased urban development pressure from Sydney but hold important biodiversity and natural systems value.

[46] *Local Government Act* 1993 (NSW).
[47] David Farrier, Rosemary Lyster, Linda Pearson, Zada Lipman, *Environmental Law Handbook Planning and Land Use in New South Wales* (3rd ed, 2000) at 218.

FIGURE 2.



The demarcation of responsibility along with the complexity of legal and environmental issues, have long-been identified as areas for review within Australia's governance system. A decade has now passed since the questions were first officially raised about whether traditional urban development patterns were compatible with Sustainability. Indeed, Australia's urban form was amongst the first areas of ESD concern to be identified by the Commonwealth Government. In 1991, in response to the Brundtland Report, the Commonwealth commissioned Working

Groups[48] to investigate the implementation of ESD principles, in several sectors of the Australian economy. Urban Form was amongst the list, which also included Energy Use and Transport.

THE SYDNEY SUBURBAN SPRAWL

'Australians are the most suburban people in the world. A greater proportion of the people live in cities than anywhere else and Australian cities are more "suburban" [detached house and garden] than any others. A greater proportion of the people own their own houses than anywhere else and Australians started doing this sooner and in greater numbers than people in other countries.' - Donald Horne (1971).[49]

Even at the turn of the 20th Century Australia was a nation of cities, with Sydney, Melbourne and Brisbane being home to over 30 per cent of the nation's entire population. Thus, when Horne, one of the most influential Australian commentators of the late 20th Century, wrote about 'suburbia' in *Red Tiles and Hydrangeas*, Sydney was already a sprawling city of the seventies.

A child of the transport revolution, Sydney's suburban, low-density building grew at a time of rapid transport development, particularly that of the car. Sydney's car-driven suburban spread, was fuelled also by government incentive programs aimed at assisting first home-buyers to achieve the so-called 'Australian dream' of home ownership. Indeed, so powerful is this social expectation that governments' political mandates have been significantly dependent on the strength of housing affordability and home ownership incentives. The current Prime Minister, the Hon. John Howard has not ignored the 'dream's' political significance:

> I am committed to preserving and expanding the levels of home ownership, which are essential to social cohesion and stability.[50]

In the second half of the 20th Century, the suburban sprawl has been the most characteristic feature of Australia's pattern of human settlement. The high growth in the outer suburbs of the capital cities is due, in no small part, to most of the

[48] *Ecologically Sustainable Development Working Groups: Final Report – Executive Summaries* (Canberra:AGPS,1991).
[49] Donald Horne, 'Red Tiles and Hydrangeas' in *Australia: This Land – These People* (1971), Readers Digest at 45.
[50] Prime Minister, the Hon John Howard, *Speech* delivered to the annual convention of the Housing Industry Association, May 2002.

'affordable' land for urban housing being designated on the city fringes. These large land parcels have been assembled by the Land Commissions, which were set up in most states by the Whitlam Government in the early 1970s.

The most recent data from the Australian Bureau of Statistics on population reveals that this trend continues:

> Supported by a combination of factors such as high levels of demand for low density housing among young families, high levels of car ownership and favourable land use regulations….[t]ypically, new suburbs form on the fringes of the city. Starting from a low population base, they grow rapidly until they become more firmly established, after which they attract even more residents. This second stage is typified by slower growth, but can involve large absolute numbers. The cycle then starts afresh, with development on the new fringe.[51]

Sydney's residential property market has been experiencing a major and extended boom. The city's runaway house prices have seen the key Housing Affordability Index, which takes into account interest rates, home prices and incomes, slump to its lowest level on record. The Australian Bureau of Statistics measures housing affordability as the proportion of lower income households (i.e. less than the median income of $36,400), which pay more than 30 per cent of their incomes in housing costs. The average first home-buyer's mortgage in Sydney is now costing 40.6 per cent of average incomes.

As a result of this latest data, and calls from the Housing Industry Association for tax relief for new housing costs, the Commonwealth Government has established a Productivity Commission Inquiry into housing affordability and is calling on the States to accelerate land releases on the city fringes.

Thus, Sydney, Australia's biggest and most populace city continues to grow. Its population is expected to swell by another 25 per cent[52] over the next 20 years and thousands more hectares of rural and semi-rural land are being or are soon to be

[51] Australian Bureau of Statistics, *Australian Social Trends 2000 Population – Population Distribution: Regional Populations: growth and decline*. Cat no 4102.0 (Canberra: AGPS, 2000).
[52] PlanningNSW, *Shaping the Central Coast Action Plan – Version II: Exhibition Draft, A Work in Progress* (27th November 2002), Population Projections (1999) at 132.

released to house the extending suburbs.[53] Already, the environmental stresses on the outlying areas accommodating the Sydney spill over are manifest.[54]

The NSW Central Coast has, for the past 25 years, been one of the major land release contributors for Sydney's Urban Development Program (SUDP). For example, in 1988/89 together the Local Governments of Gosford and Wyong contributed 17.3 per cent of the total SUDP and nearly a quarter of lots in the low-price sub-market. In the two years to June 2001, the Central Coast contributed 11.7 per cent of the total lots produced in the Greater Metropolitan Region.[55]

More land releases are scheduled and the NSW Government is on the public record as saying that 30 per cent of Sydney's new housing is to be built on such sites, which are generally classified as 'greenfield.'[56] PlanningNSW estimates the NSW Central Coast's population of 297,592 (Australian Bureau Statistics, June 2001) will grow by around 80,000 over the next 20 years.

GOSFORD – A COASTAL CITY UNDER PRESSURE

Gosford, situated 80 kilometres from the Sydney Central Business District, is nominally, the NSW Central Coast's regional capital. The region's rapid population growth has already resulted in a number of significant problems, acknowledged now by the NSW Government for many years. These problems have been officially identified as being:

- a shortage of jobs and vulnerability to economic downturns
- lags in provision of human services and public transport
- loss of biodiversity and open space to urban and rural uses
- estuarine and lagoon water pollution as a result of urban development and run off
- a sense of being overshadowed by Sydney and a lack of regional autonomy.[57]

[53] Ibid, at 130 and Peta Donald, 'Land Availability Considered Contributing Factor to Housing Crisis' *ABC Radio, The World Today* (8 July 2003).
[54] See generally *Australian Terrestrial Biodiversity Assessment 2002* above n 21.
[55] Planning NSW, *Shaping the Central Coast Action Plan*, above n52 at 130.
[56] The Hon Diane Beamer, NSW Minister assisting the Minister for Planning, cited in Peta Donald, 'Land Availability Considered Contributing Factor to Housing Crisis' above n53.
[57] Planning NSW, *Shaping the Central Coast* (Sydney: Crown Copyright, 1999) at 6.

The region also endures high rates of unemployment, suicide rates, domestic violence and child abuse along with other key indicators of social stress.[58] The NSW Government acknowledges these negative social consequences are the result of family isolation caused by the region's rapid population growth:

> which has not been matched by the development and provision of the required levels of physical and social infrastructure and services, resulting in a backlog of considerable significance.[59]

Economically, the region is dependent on Sydney. Its capacity to attract major industrial investment has been marginal, with one of the exceptions being urban development. This has left an estimated one third of the region's workforce, with no alternative but to commute long distances daily to Sydney for employment. PlanningNSW estimates that between 1996 and 2001 as many as 31,000 residents were Sydney commuters.[60]

These indicators alone show a region under stress, but when the ecological considerations are added, the impact of Sydney's urban expansion into the region raises significant ESD questions.

Along with the existing environmental pressures that have resulted from the largely Sydney migration of the past 20 years, Gosford is now experiencing more urban expansion and consolidation, due to a major surge in property prices. The market forces of the greater Sydney region's property boom have resulted in Gosford's housing and residential land prices growing by an average of 25 per cent, per annum, over the past two years, making it one of the highest capital growth areas in the Sydney market.[61] Land valuations, due for determination by the NSW Valuer General this year, are expected to mirror the dramatic rises experienced in the Wyong shire, which in 2002/3 saw land valuations rise by as much as 75 per cent in some areas.[62] These market conditions have seen Gosford and the NSW Central

[58] PlanningNSW, *Shaping the Central Coast Action Plan,* above n52 at 98.
[59] Id at 97.
[60] Id at 99.
[61] Real Estate Institute of NSW, Report for September 2003, 'average stamp duty collected on residential properties at Gosford had risen by 24.2% over the past 12 months'.
[62] Figures obtained from the Office of Chris Hartcher, MP, State Member for Gosford.

Coast, generally, attract increased development interest, given the continuing expectations of growth in the sector.

This increased development activity is placing considerable development pressure on the Gosford City Council. One indicator is the amount of money the Council has spent on legal bills fighting development issues in the Land and Environment Court. In the year 2002-2003, the Council spent $1.1 million, just falling short of the $1.14 million record set in 1994-95. Of the 35 appeals it fought in the court last year, Gosford City Council won only three.[63]

Gosford is, therefore, a useful research crucible in which to evaluate how effectively our statutory authorities are balancing the competing demands of Sydney's urban expansion with biodiversity conservation. Despite urban expansion having already had significant impacts on the ecological integrity and biodiversity features of the area, Gosford is still highly valued for its biodiversity characteristics, as it holds important biodiversity and ecologically sensitive natural systems.

As part of the Sydney Basin Bioregion it holds many of the natural systems, which were so greatly admired by the early Australian naturalists. It holds vegetation and fauna communities endemic to the Hawkesbury Sandstone, Narrabeen Shale and Quaternary Series geological formations, along with wetlands, littoral, gully and dry rainforests, coastal heaths, estuaries and lagoons, sand plains and coastal dunes. Some of these are now endangered ecological communities and others, while not themselves threatened, are habitat for threatened species. It is to some of these specific systems that we now turn as case studies.

[63] Gosford City Council, *Agenda G.C.C. Meeting, 25th August 2003*: Report to Council from G.C.C. Legal Department.

THE CASE STUDIES

Cappers Gully – A Rainforest Ecosystem and Valued Community Asset

Cappers Gully is used to demonstrate a number of issues. It reveals the power of the community in influencing land use decisions by utilising the political process, along with the power of collaboration between the three tiers of government, non-government organizations and the community in protecting valued community and ecological assets. It also demonstrates the tremendous influence private rights to property and planning law has on decision makers.

Cappers Gully is a 10-hectare rainforest gully, located 500 metres from the Gosford City Central Business District. It is the site of one of the longest running bush regeneration projects in NSW and has long been a valued community asset. It is habitat for a number of threatened species of fauna and flora, all of which are protected by the *Threatened Species Conservation Act* 1995 NSW (hereinafter *TSC Act*) and some species are also protected by the Commonwealth's *EPBC Act.*

What became known as the Save Cappers Gully campaign started in May 2002, when a development application for eight townhouses was lodged with the Gosford City Council.

The medium density zoning on the one-hectare bushland block, had been legislated via a Local Environment Plan in 1981, as the result of a land swap deal with the Council. However, the community had long perceived the land to be in public ownership, along with the gully's other nine hectares.

The developers, having taken out on an option on the land, commissioned a flora and fauna survey, which failed to detect any threatened species on the land. They also claimed in their statement of environmental effects that, despite the site's steep incline and proximity to land deemed under NSW legislation to be protected as Urban Bushland,[64] the development could proceed without causing significant

[64] *State Environmental Planning Policy, No.19.*

environmental harm, even though the proposal would involve substantial native vegetation clearance deemed necessary to mitigate the high bushfire risk.
The community, including residents who had lived in the area for 30 years, raised strong objection. They stated that they had lived alongside fauna, such as koalas and platypuses, which had disappeared from the gully as a result of the urban encroachment, and that they would not allow the remaining threatened species, including owls and migratory birds, to suffer a similar demise.

The community mobilised, by collecting two thousand signatures petitioning the Council and the State Government to halt development in the area. They also commissioned ecological and geo-technical reports, which raised threatened species and landslip concerns. Additional support was garnered from the influential local State Member of Parliament, Chris Hartcher, MP, the Nature Conservation Council of NSW, the Australian Conservation Foundation and the locally based Central Coast Community Environment Network.

An intense political and media campaign, over the course of a year, culminated in the Carr Government, on the eve of the 2003 NSW State Election, promising to allocate $1.5 million on a dollar for dollar basis with the Gosford City Council, for the purchase of green space in Gosford, specifically citing Cappers Gully as one of the areas designated for purchase.

Council officers remained unswayed by the political pressure and recommended, that due to the legal authority of the 20-year-old zoning and land swap, that Council approve the application with conditions.

Council, however, unanimously rejected the application, and resolved to enter into negotiations with the developer to bring the land into public ownership. The developer lodged both Class One and Class Four appeals with the Land and Environment Court. However, a negotiated settlement of $890,000 was reached, with the legal proceedings being vacated prior to the settlement, which took place in September 2003. This resulted in a significant legal cost saving, as the Council's legal defence for the Class One appeal, alone, was estimated to be at a minimum $150,000.

The significance of the case is evidenced by the NSW Nature Conservation Council referring to the collaboration of the community, local, state and federal politicians and non-government organizations as a landmark in protecting ecological amenity in the urban context.

The ongoing research into the Cappers Gully case study will encompass interviews with the decision makers, both politicians and bureaucrats. It will explore why and at what point the statutory protection of biodiversity broke down in the bureaucratic decision-making process and the influence case law and planning law has in this process. It will also explore the notion of Public Interest and will aim to quantify what qualities and values democratically elected representatives assess, when determining which ecologically sensitive and community valued areas in the urban context are places worthy of incorporation into the national estate and at what economic cost**.**

An Endangered Ecological Community – Unknown Cumulative Impact

The endangered ecological community, the Sydney Coastal Estuary Swamp Forest Complex is used to illustrate how individual land use decisions on private property have a cumulative impact on natural systems. It also illustrates the need for a comprehensive system to monitor the impacts of land use decisions. Furthermore, it demonstrates the interaction of the various tiers of land use decision-makers.

The Gosford Local Government Area is characterised by its extensive systems of coastal estuaries and lagoons. These systems are ecologically sensitive and are coming under increasing pressure from urbanisation, being viewed now as potential waterfront home locales or low-lying flat sites for recreational uses like golf or other sports.

These areas are habitat for the Sydney Coastal Estuary Swamp Forest Complex,[65] which is an Endangered Ecological Community listed under the *TSC Act*. The NSW Scientific Committee, appointed under the *TSC Act*, states that:

[65] Sydney Coastal Estuary Swamp Forest Complex (hereinafter SCESFC).

> In view of the small size of existing remnants, and the threat of further disturbance and degradation, the Scientific Committee is of the opinion that the Sydney Coastal Estuary Swamp Forest Complex in the Sydney Basin Bioregion is likely to become extinct in nature in New South Wales unless the circumstances and factors threatening its survival or evolutionary development cease to operate.[66]

The *circumstances and factors* threatening the complex are identified as being: vegetation clearance and filling for various urban and recreational uses, urban runoff and weed invasion.

Apart from the representations protected in the National Parks and Wildlife Service Cockle Bay Nature Reserve, the SCESFC in the Gosford Local Government Area is largely situated on privately owned land.

A comprehensive mapping of the complex is as yet unavailable. Therefore, given the complexity of wetlands functions, the cumulative impact of the private land use decisions affecting the complex is unquantified:

> …there is currently a general lack of understanding of wetland science and information gaps in wetland ecosystem dynamics…which make predictions of the impacts of development on wetlands rather nebulous.'[67]

In recent times a number of major development proposals involving the SCESFC in Gosford have been the subject of ministerial, council and court determinations, as well as triggering intervention by Commonwealth and State agencies. These proposals have variously involved determination of a golf course, a recreational park, a service station, subdivision and council drainage systems.

The importance of this complex in the overall coastal ecology is significant, given that wetlands are acknowledged as being among the earth's most fertile and productive ecosystems. The case study demonstrates the difficulties facing land use decision-

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[66] NSW Scientific Committee, National Parks and Wildlife Service, available at: <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Sydney+coastal+estuary+swamp+forest+complex+in+the+Sydney+Basin+Bioregion+endangered+ecological+community+listing >13th May 2003 (9th October 2003).

[67] Mulamootil, G, Warner, B and McBean, E, (eds), *Wetlands Environmental Gradients, Boundaries and Buffers* (1996) at 3.

makers when there are gaps in the fundamental scientific knowledge base along with the need for serious monitoring of the ecological effects of decisions.

The ongoing research into this endangered ecological community case study will encompass interviews with representatives from the NSW Scientific Committee and decision makers from the three tiers of government. Analysis of case law from various Land and Environment Court decisions involving the SCESFC will also reveal the weighting given to planning law and biodiversity law in these cases. As so little is known about how changed hydrology and land use impact on this wetland system, the scientific method to start quantifying the effects is monitoring. This research will evaluate the efficacy of the law and regulatory frameworks in ensuring that monitoring of individual and cumulative impacts of decisions is undertaken and whether or not there is adequate statutory direction and financial allocation for such monitoring and the enforcement of conditions of consent.

Sparks v Gosford City Council - A Threatened Species Habitat Tree

This case is used to illustrate the Gosford City Council's disaffection with the Land and Environment Court. It also investigates the court's determination of significance in relation to impacts on threatened species and examines the role of expert witnesses in decisions affecting biological systems.

In March 2003, the Land and Environment Court handed down its decision of the Class One merit appeal, *Sparks v Gosford City Council,*[68] in favour of the appellant.

In biodiversity terms, the case centred on whether a Species Impact Statement was necessary to determine the proposal's potential impact on the Yellow-bellied Glider(hereinafter YBG), which is a mammal listed under the *TSC Act.* The draft Recovery Plan for the YBG had been released during the operation of this case. The Threatened Species Recovery Plans are important statutory instruments under the *TSC Act*, outlining steps to be undertaken to recover and prevent the extinction of threatened species.

[68] *Sparks v Gosford City Council* (NSW Land and Environment Court, Commissioner Murrell, 14th March 2003)(hereinafter *Sparks*).

A habitat tree for the YBG had been identified on the land, which was the subject of a development application, which had been refused by the Council. The court, on appeal, was asked to determine whether the impact on the species would be 'significant'. If deemed so, this, under the *EP&A Act*, would trigger the need for a Species Impact Statement (hereinafter SIS) to be undertaken. An SIS involves an extended survey of the fauna and its use of the habitat, after which a conclusion would be drawn as to the likely impact of the development proposal on the local and extended YBG populations. If it were to be deemed significant then the development, as proposed, would not be able to proceed.

A number of expert witnesses were called to give evidence to the court, which ultimately ruled that it was not necessary to undertake an SIS.

This case illustrates the adversarial construct of the Australian legal system, which utilises opposing argument as the avenue for the seeking of justice, equity and truth. Whether this system is the most appropriate for the deliberation of matters concerning natural systems is debateable.

The complexity of natural systems is often beyond the scope of current human knowledge. Therefore, argument about potential impacts of land use decisions on biological systems is frequently a matter of expert witness assertion, rather than being apodictic.

The reliance on such empirical matter upon which to base legal decisions is a problem in a jurisprudential sense.[69] Not only is the assertoric nature of such testimony problematic but also the relationship between expert witnesses and their principals is a concern. Expert bias has been ranked by one third of Australian judges as the most serious problem in relation to expert evidence, followed by the failure to prove the basis of expert opinion.[70]

This is of particular relevance to the NSW Land and Environment Court, due to the court's heavy reliance on expert witnesses, the extent to which the Honourable

[69]Sir Henry Maine, *Ancient Law. It's Connection with the Early History of Society and its Relation to Modern Ideas* (4th ed, 1912) at 189.
[70]Ian Freckleton, Prasuna Reddy, Hugh Selby, *Australian Judicial Perspectives on Expert Evidence: An Empirical Study* (The Australian Institute of Judicial Administration Inc., 1999).

Justice R.N.Talbot recently referred, 'It is difficult to identify any other jurisdiction, specialist or otherwise, that relies as extensively on the information, analysis and opinions that experts can provide.'[71]

The ongoing research into this case study will encompass an appraisal of the *Sparks* decision and the flow on case law effect for future biodiversity litigation. The effect the decision has had on Gosford City Council staff's assessment of threatened species issues will also be explored. Moreover, the research will involve an investigation into the relationship between science and the law, particularly in the adversarial crucible of the NSW Land and Environment Court.

CONCLUSION

The concept of ESD has been embraced by Australia in a legislative sense. Indeed, as far as statutory objectives are concerned, Australia is one of the global leaders in its stated commitment towards sustainable outcomes. So why is it that Australia continues to fail in halting the biodiversity loss which has seen, amongst other things, Australia account for one third of the world's recent mammal extinctions and nearly 3000 of our unique vegetation communities at risk?[72]

From this paper we are able to draw some preliminary conclusions[73] to this question in the urban context, of greater Sydney.

Firstly, it is clear that Australian biodiversity loss will continue until environmental laws are reframed with specific assessment criteria and targets, upon which land use decisions can be based, and consistently implemented. Furthermore, even though it may be a major political challenge in our prevailing Western Capitalist Democracy, environmental concerns need to be given equal weighting with social and economic considerations in an integrated triple bottom line assessment process.

[71] The Hon Justice R.N. Talbot, paper delivered at the Urban Development Institute of Australia, Expert Witness Forum, Sydney, 8th August 2003 at 1.
[72] *Australian Terrestrial Biodiversity Audit* above n21.
[73] Although the ongoing research is focussed on the Gosford area, it is hoped that the findings will offer a more generally applicable model for addressing issues of urban development when this development impacts upon areas with significant biodiversity qualities.

Moreover, until biodiversity conservation is consistently implemented in the assessment of development applications by Local Government and in the civil and criminal enforcement of regulations, Australia's commitment to ESD is likely to remain an unobtainable ideal.

Having canvassed the complexity of the cultural, legal, governance, economic, planning and ecological considerations with which land use decisions makers must contend, it is timely to recall that a decade ago, all levels of Australian government agreed that extraordinary governance measures were necessary to stem the tide of the continent's environmental degradation.

While it is clear that the measures adopted by the landmark *IGAE* were positive, particularly for recognising that the problems exist, what is equally clear, from even a quick glance at the 2002 Australian Bureau Statistics report *Measuring Australia's Progress,*[74] is that the measures taken, thus far, are inadequate. In five of the six indicators of progress on environmental issues – biodiversity, land clearance, land degradation, inland waters and greenhouse gases - Australia is going backwards.[75] Stronger legislative commitment to the environment and comprehensive monitoring and enforcement of environment protection regulations are obviously needed.

The challenge is, therefore, open for Australian legislators and regulators to meet the realistic legal and governance demands of the sustainability era, in order that the words 'biodiverse' and 'city' are not mutually exclusive in the Australia of tomorrow.

[74] Australian Bureau of Statistics, *Measuring Australia's Progress*, 1370.0 – 2002, (Canberra AGPS,2002).
[75] The only indicator to show improvement was Air Quality.

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