

## Legislation Note

### ENHANCING THE GARDEN CITY: TOWARDS A DEEPER SHADE OF GREEN

*Parks and Trees Act 2005*  
*Act 4 of 2005*

This note reviews the Parks and Trees Act 2005. It argues that while on the whole, it represents a step forward from the previous legislation, there is scope for further improvement. In particular, consideration needs to be given to the inclusion of further legal safeguards to protect the ecological integrity of our natural heritage.

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*We do not inherit the earth from our ancestors;  
we borrow it from our children.*

*Native American proverb*

#### I. Singapore's garden city and its natural heritage

1 With only about 680km<sup>2</sup> of land, and a population of 4.3 million, Singapore faces immense pressure to develop its land to meet all manner of socio-economic needs. In the circumstances, Singapore has on the whole done remarkably well in maintaining a “clean and green” environment in spite of its rapid urbanisation and industrialisation. Much credit for this goes to an enlightened political leadership who understood, very early on, the importance of concurrently protecting the urban environment from deterioration while pursuing economic development.

\* I would like to thank Prof Koh Kheng Lian and Assoc Prof Lye Lin Heng of the National University of Singapore Law Faculty for their comments on my earlier draft of this legislation note. All shortcomings in the note are mine alone.

2 The garden city programme was introduced by the then Prime Minister in 1967.<sup>1</sup> In 1968, the then Minister for Health told Parliament during the Second Reading of the Environmental Public Health Bill<sup>2</sup> that:<sup>3</sup>

The improvement in the quality of our urban environment and the transformation of Singapore into a garden city – a clean and green city – is the declared objective of the Government.

3 The initial aim of the garden city programme was simply to plant as much lush greenery as possible so as to improve the quality of the environment.<sup>4</sup> To achieve this quickly, fast-growing trees, whether indigenous or exotic, were selected for planting, to establish a green mantle for the island. Once this had been achieved, flowering shrubs and trees and fruit trees were planted to avoid the monotony of continuous island-wide green vegetation and to add dashes of colour to the landscape. The greening has not just stopped at the ground level, but is also taking place in high-rise buildings to make Singapore a garden city on all levels.<sup>5</sup>

4 Today, Singapore has taken its garden city concept a notch higher with its “city in a garden” plan. This entails turning green spaces into a seamless network of gardens, and transforming parks from passive green areas to places teeming with cultural activities and performances, nature programmes and tours, and even vibrant night life.<sup>6</sup> More recently, to strengthen Singapore’s garden city image, a second botanical garden has been planned for the Marina Bay area. Unlike the first which focuses on botanical collections and research, this second botanical garden will focus on mass floral displays and “creative plant-based edutainment”.<sup>7</sup>

5 The garden city programme has largely been successful in covering Singapore with lush greenery; so successful in fact that

1 “Singapore’s Green Look Result of 30-Year Policy, says SM Lee”, *The Straits Times* (21 October 1995).

2 Bill 36 of 1968.

3 *Singapore Parliamentary Debates, Official Report* (16 December 1968) vol 28 at col 396.

4 Lee Sing Kong, “Concept of the Garden City” in *Environment and the City: Sharing Singapore’s Experience and Future Challenges* (Ooi Geok Ling ed) (Times Academic Press, 1995) (“*Environment and the City*”) at p 133.

5 “Look Up, See the Green”, *The Straits Times* (24 February 2001); and “Green Piece”, *The Straits Times* (5 October 2002).

6 “‘City in a Garden’ Plan set out for Singapore”, *The Straits Times* (11 December 1998); and “Green Piece”, *supra* n 5.

7 “Another Botanic Gardens Planned for Bay Area”, *The Business Times* (14 January 2005).

Singapore is exporting its expertise to other cities.<sup>8</sup> The role of law in achieving this success cannot be underestimated. Tracing the legal development underlying Singapore's greenery, law professor Koh Kheng Lian has noted that the legal framework has helped to guide planners in mapping Singapore as a garden city. The law has also established the institutions necessary to carry out and manage the programme of developing a garden city, such as the Parks and Recreation Department, and the National Parks Board. Without these legal instruments, the implementation of the garden city concept might not have been so successful.<sup>9</sup>

6 It appears, however, that the garden city concept as implemented in Singapore has been more successful in "taming and manicuring"<sup>10</sup> the urban environment with greenery and less so with protecting the ecological integrity of the natural heritage of Singapore.<sup>11</sup> Much of the physical landscape of the island has been irreversibly altered to meet the needs of its residents. In the course of the last century, land has been reclaimed at the expense of coastal ecosystems, swamps have been filled, hills have been levelled, reservoirs and lakes have been created, and drainage patterns have been altered.<sup>12</sup> It has been estimated that between 1819, when the British first established a presence in Singapore, and 1990, more than 95% of the island state's original vegetation cover has been

8 "S'pore All Set to Clone its Garden City Success Overseas", *The Straits Times* (31 December 2003).

9 Koh Kheng Lian, "The Garden City and Beyond: The Legal Framework", in *Environment and the City*, *supra* n 4, at pp 148, 166.

10 Ho Hua Chew, "Don't Forget the S'pore Countryside", *The Straits Times* (31 December 2004); and "Clean and Green is Not Green Enough", *The Straits Times* (11 November 2005).

11 While of late, greater attention is being given to the threat of exotic species, the replacement of exotic species with indigenous ones is confined to the fringes of nature reserves and nature areas. See "The Garden City is Getting Greener", *The Straits Times* (6 November 2003).

12 Richard T Corlett, "The Ecological Transformation of Singapore, 1819-1990" (1992) *Journal of Biogeography* 19(4): 411-420, at 415.

entirely cleared.<sup>13</sup> This includes 99.8% of the original forest cover<sup>14</sup> and 99% of coastal mangroves and mudflats.<sup>15</sup>

7 Today, more than half the main island is urbanised, and most of the smaller islands have been developed for industry or recreation. Notwithstanding Singapore's "clean and green" image, the urbanised areas are ecologically impoverished. The density of high-rise buildings in built-up areas has affected the microclimate by raising temperatures by as much as seven degrees Celsius.<sup>16</sup> The soil condition has been impaired with most of the original topsoil having been removed, buried or incorporated with construction wastes, and much of the soil is severely compacted. Large areas are concreted over, and run-off is channelled directly into the drainage system without passing through the soil. And while Singapore aptly describes itself as a *garden* city with its widespread systematic planting of fauna in urban areas, such landscaping may actually harm rather than enhance the indigenous biodiversity when one considers that a large number of these are actually exotic species.<sup>17</sup> It is estimated that the total overall loss of biodiversity (flora and fauna, recorded and unrecorded) may be as high as 73%,<sup>18</sup> and with 77% of the island's species considered "threatened", the future prospects for Singapore's surviving biodiversity is believed to be bleak.<sup>19</sup>

- 13 Barry W Brook, *et al*, "Catastrophic Extinctions Follow Deforestation in Singapore" (2003) *Nature* 424: 420–423, at 421, citing IM Turner, *et al*, "A Study of Plant Species Extinction in Singapore: Lessons for the Conservation of Tropical Biodiversity" (1994) *Conservation Biology* 8(3): 705–712; and Richard T Corlett, "Environmental Heterogeneity and Species Survival in Degraded Tropical Landscapes" in *The Ecological Consequences of Environmental Heterogeneity* (Michael J Hutchings, *et al* eds) (Blackwell Science, 2000) at p 333.
- 14 Corlett, "The Ecological Transformation of Singapore, 1819–1990", *supra* n 12, at 415.
- 15 Clive Briffett & Jamie Mackee, "Environmental Assessment in Singapore: An Enigma Wrapped in a Mystery!" (2002) *Impact Assessment and Project Appraisal* 20(2): 113–125, at 114.
- 16 "Orchard Road's Red Hot – and It's Not About the Sales", *The Straits Times* (14 October 2005).
- 17 Indeed, Art 8(h) of the Convention on Biological Diversity 1992 (UN Doc DPI/130/7, entered into force on 29 December 1993) provides that each Contracting Party shall as far as possible and as appropriate "[p]revent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species". Fortunately, a number of the introduced species in the open areas have become "naturalised" over the years and are contributing to the biodiversity. See Corlett, "The Ecological Transformation of Singapore, 1819–1990", *supra* n 12, at 418 and 419.
- 18 Brook, *et al*, *supra* n 13, at 421.
- 19 *Id*, at 422.

8 While Singapore is on the whole ecologically impoverished, the same cannot be said of its nature areas<sup>20</sup> and nature reserves. According to the National Parks Board, Singapore probably has the world's highest biodiversity density – about 2,000 species of flora and fauna can be found in some 2,800 ha of nature reserve.<sup>21</sup> In one two-hectare plot alone, at least 320 species of trees were found to have existed on site for the last 5,000 years.<sup>22</sup> This high density of biodiversity makes the task of nature conservation easier since conservation efforts can be concentrated in a small area. At the same time, it means that any encroachment of nature reserve land is likely to have a significant ecological impact. Even then, our nature areas and nature reserves have not been spared from the urbanisation and industrialisation onslaught. Over the years, there have been numerous instances of nature areas and nature reserves being sacrificed for various types of “development”, including a golf course,<sup>23</sup> a road,<sup>24</sup> a prison detention centre for illegal immigrants and drug addicts and an aqua-culture farm,<sup>25</sup> land reclamation,<sup>26</sup> a land-fill,<sup>27</sup> a water reservoir,<sup>28</sup> and water storage tanks.<sup>29</sup> Some of these encroachments have

20 Nature areas are areas rich in biodiversity that are not needed for development until in the long term. They are owned by the State and managed by the National Parks Board, and are identified in the Urban Redevelopment Authority's Special and Detailed Control Plan, a non-statutory plan with special guidelines annexed under the statutory Republic of Singapore Master Plan 2003 (URA website <<http://www.ura.gov.sg/ppd/gazettedmp2003/index.htm>> (accessed 21 March 2006)). Designation as a nature area carries no legal significance, but administratively, the Board must be consulted on any development proposal in or near these areas, and an ecological study may also be required. The declared intention is to keep these nature areas “for as long as possible”: see *The Singapore Green Plan 2012* (Foo Siang Luen ed) (Ministry of the Environment and Water Resources, 2006 Ed, 2006), p 14.

21 “There's Life Aplenty in the Nature Reserves”, *The Straits Times* (21 June 1999). More recently, a scientific study found that forest reserves comprising only 0.25 per cent of Singapore's total land area now harbour over 50 per cent of the residual native biodiversity. See Brook, *et al*, *supra* n 13.

22 “Same Tree Species in Bt Timah Forest for Last 5,000 Years”, *The Straits Times* (21 May 2005).

23 “Kranji Sanctuary Golf Course to Open All 18 Holes on Nov 9th”, *channelnewsasia.com* (27 October 2004).

24 “Can Land-scarce S'pore Afford Nature Conservation?”, *The Straits Times* (13 September 1998); and Ho Hua Chew, “Towards a Greener Plan for Nature Preservation in Singapore”, in *State of the Natural Environment in Singapore* (Ho Hua Chew & Clive Briffett eds) (Nature Society (Singapore), 1999) at p 108.

25 “Barbed Wires, Fences Go Up in St John's”, *The Straits Times* (25 February 1999).

26 Ho, “Towards a Greener Plan for Nature Preservation in Singapore”, *supra* n 24, at pp 12–13.

27 “Land-use Surprise: Coral Sites, Mangrove Areas to Go”, *The Straits Times* (22 April 2003).

28 *Ibid.*

29 “Water Tanks Being Built in Forest”, *The Straits Times* (23 August 1998).

arguably been made in less than inevitable circumstances.<sup>30</sup> Seen in this context, the potential importance of the Parks and Trees Act 2005<sup>31</sup> cannot be underestimated.

## II. Highlights of the Parks and Trees Act 2005

9 The Parks and Trees Act 2005 (“the new Act”) came into force on 1 August 2005. It replaces the now repealed Parks and Trees Act<sup>32</sup> and makes substantial amendments to the National Parks Act;<sup>33</sup> now renamed the National Parks Board Act. The Second Minister for National Development took pains to highlight to Parliament at the second reading of the Parks and Trees Bill<sup>34</sup> on 25 January 2005 that in preparing the Bill, various stakeholders *including* the Singapore Institute of Architects, the Institute of Engineers, and the Real Estate Developers’ Association of Singapore, were consulted.<sup>35</sup> The Minister did not say whether his ministry consulted the public and the nature conservation non-governmental organisations such as the Nature Society of Singapore, surely also major stakeholders concerned with a subject matter of such fundamental public importance as the management of the natural heritage of Singapore. If indeed the public and conservation groups were not consulted, it would seem odd that the only people perceived by the government as having legitimate concerns are those associated with the real estate development industry.

10 As noted by the Second Minister for National Development, the key new provisions of the Bill are:

- (a) the introduction of conservation of mature greenery in designated heritage roads;
- (b) the increasing of the penalties for offences committed in national parks, nature reserves, and tree conservation areas; and

30 Ho Hua Chew, “The Singapore Green Plan Endangered” (1996) *Nature Watch* 4(3): 4. See also Dominic Nathan, “Consider New Ideas Before Encroaching into Nature Area”, *The Straits Times* (14 January 1999).

31 Act 4 of 2005.

32 Cap 216, 1996 Rev Ed. For an account of the statutes preceding the Parks and Trees Act 2005, going back to the Forest Ordinance (Ordinance 22 of 1908), see Koh, “The Garden City and Beyond: The Legal Framework”, *supra* n 9.

33 Cap 198A, 1997 Rev Ed.

34 Bill 55 of 2004.

35 *Singapore Parliamentary Debates, Official Report* (25 January 2005) vol 79 at col 502.

(c) the enhancement of the effectiveness of the National Parks Board (“the Board”).

**A. *Heritage road green buffer***

11 To conserve “roadside greenery”, s 16 of the new Act empowers the Minister for National Development (“the Minister”), if it appears to him expedient to conserve the flora in any area of Singapore other than a national park or nature reserve as important elements of streetscape or landscape, and after consulting the Board, to designate any green verge or any area abutting any street as a heritage road green buffer. Once designated, it is the function of the Board to manage and maintain the buffer; and the Commissioner of Parks and Recreation (“the Commissioner”), who must now either be an officer or employee of the Board,<sup>36</sup> is empowered to enter upon the land to take action or carry out work that is reasonably necessary for the management and maintenance of the buffer.<sup>37</sup> Furthermore, no person may, except with the approval of the Commissioner, alter or erect or place any structure in, above, across or under such an area so designated;<sup>38</sup> and the Commissioner may require an offender of this restriction to restore the area to its former state, or if it is not reasonably practicable or desirable to do so, alternatively require the offender to alleviate the effect of the contravention.<sup>39</sup>

**B. *Enhanced fines and appeals***

12 The new Act also revises upwards the maximum fine for a number of offences. In addition, a new provision empowers the court before which a person is convicted of the offence, to, in addition to passing sentence for that offence, make an order requiring that person to pay to the Government or the Board, as the case may be, a sum of money to be fixed by the court which, in the opinion of the court, represents the value (including any intrinsic value) of the damaged or destroyed property.<sup>40</sup> The new maximum fine for wilfully or negligently destroying

36 Section 4 of the new Act.

37 *Id.*, s 17.

38 *Id.*, s 18.

39 *Id.*, s 21.

40 In 2003, a property management services firm was fined \$8,000 for illegally felling a tree in a tree conservation area. The firm was also ordered to pay \$76,035 to the government as compensation for the loss of the tree. It is not clear what the legal basis for seeking compensation for the felled tree is, since the National Parks Act which provided for the offence at the time did not have a provision similar to that in s 47 of the Parks and Trees Act 2005 for the recovery of compensation based on the

or damaging objects of zoological, botanical, geological, ethnological, scientific, or aesthetic, interest within any national park or nature reserve is \$20,000 (up from \$10,000).<sup>41</sup> The previous maximum fine of \$10,000 for cutting or felling any tree with a girth exceeding one metre within a tree conservation area has also been revised to \$50,000.<sup>42</sup> According to the Minister, the old maximum fine had stood at \$10,000 since 1994, and had proved to be an inadequate deterrent as potential offenders had found it economically more worthwhile to cut the tree and pay the fine rather than expend costs to conserve the tree.<sup>43</sup> The new maximum fine of \$50,000 (also up from \$10,000) also applies to offences involving restricted activities within the national parks or nature reserves.<sup>44</sup> These activities relate to the protection of property, trees and plants;<sup>45</sup> and animals and organisms.<sup>46</sup> Prior approval may be given by the Commissioner for some of the restricted activities. Presumably, before the

value of the tree. See “DTZ Fined \$8,000 for Illegal Felling of Tree”, *The Straits Times* (25 March 2003).

41 Section 10(3) of the new Act.

42 *Id.*, s 14(2).

43 *Singapore Parliamentary Debates, Official Report, supra* n 35.

44 Sections 8(3) and 9(4) of the new Act. The previous approving authority was the National Parks Board.

45 The activities are: (a) cutting, collecting or displacing any tree or plant or any part thereof; (b) affixing, setting up or erecting any sign, shrine, altar, religious object, shelter, structure or building; (c) clearing, breaking up, digging or cultivating any land; (d) using or occupying any building, vehicle, boat or other property of the Board; or (e) wilfully dropping or depositing any dirt, sand, earth, gravel, clay, loam, manure, refuse, sawdust, shavings, stone, straw or any other matter or thing from outside the national park or nature reserve; without the approval of the Commissioner (s 8(1) of the new Act).

The carrying out of any activity within any national park or nature reserve which one knows or ought reasonably to know causes or may cause alteration, damage or destruction to any property, tree or plant within the national park or nature reserve is also an offence (s 8(2) of the new Act).

46 “Organism” did not previously appear in the National Parks Act. It is defined in s 2 of the new Act as any genetic structure capable of reproducing itself; or a reproductive cell or developmental stage of an entity.

The activities are: (a) capturing, displacing or feeding any animal; (b) disturbing or taking the nest of any animal; (c) collecting, removing or wilfully displacing any other organism; (d) using any animal, firearm, explosive, net, trap, hunting device or instrument or means whatever for the purpose of capturing any animal; and (e) carrying or having in possession any explosive, net, trap or hunting device; without the approval of the Commissioner (s 9(1) of the new Act).

The carrying out of any activity within any national park or nature reserve which one knows or ought reasonably to know causes or may cause injury to, or the death of, any animal or any other organism within the national park or nature reserve is also an offence (s 9(2) of the new Act).

Oddly, while the release of any animal into a nature reserve without the approval of the Commissioner is also prohibited under s 9(3) of the new Act, there does not appear to be any corresponding prohibition for introducing plants or “organisms” into a national park or nature reserve.

Commissioner gives his approval, he will, subject to any general or special directions of the Minister,<sup>47</sup> have to take into account the many purposes for which national parks and nature reserves are designated, of which the propagation, protection and conservation of flora and fauna is but one among many potentially conflicting purposes.

13 Unlike under the now repealed s 24(3) of the National Parks Act<sup>48</sup> where any person aggrieved by the decision of the Board could appeal to the Minister, only a person aggrieved by the Commissioner's decision *not* to grant approval may now appeal to the Minister, who, after considering the appeal, may decide as he deems fit and whose decision is final.<sup>49</sup> In a similar vein, where previously anyone who was aggrieved by a decision of the Commissioner in relation to an application under s 7 of the now repealed Parks and Trees Act<sup>50</sup> for written permission to fell a tree in a tree conservation area or vacant land could appeal to the Minister, under the new Act, only a person aggrieved by the Commissioner's decision to *refuse* permission can now so appeal.<sup>51</sup> It is not inconceivable that this new provision will encourage an "appeal-averse" Commissioner to play it safe and grant permission when in doubt. From an ecological conservation point of view, this is a step backwards from a more neutral position to a more pro-development stance.

### C. *Planting areas*

14 Also included in the new Act are requirements for the provision and maintenance of planting areas of prescribed dimensions in premises on which building works are being carried out for which building plans require approval from the Commissioner of Building Control.<sup>52</sup> These requirements were previously administered by other competent authorities empowered to approve development, subdivision, or building plans and enforced by the Commissioner of Building Control.<sup>53</sup> The new

47 Section 4 of the new Act.

48 *Supra* n 33.

49 Section 56 of the new Act. That is to say, no further appeal on the merits is permitted. The court's supervisory jurisdiction to review the legality of the decision is not excluded. See *Anisminic Ltd v Foreign Compensation Commission* [1969] 2 AC 147. *Contra* the position prior to the coming into force of the new Act, where under the now repealed s 24(3) of the National Parks Act, *supra* n 33, anyone aggrieved by the decision of the Board (including a decision to give approval) may appeal to the Minister, whose decision is final.

50 *Supra* n 32.

51 Sections 14, 20, and 56 of the new Act.

52 *Id.*, ss 22, 23 and 25.

53 Section 15 of the Parks and Trees Act, *supra* n 32 (repealed).

Act formalises these requirements and places them under a separate approval process directly administered by the Commissioner of Parks and Recreation. No person may, except with the approval of the Commissioner granted in respect of the planting areas and in accordance with the terms and conditions of such approval, commence or carry out any building works on such premises.<sup>54</sup>

#### **D. Amendments to the National Parks Board Act**

15 The renaming of the National Parks Act to the National Parks Board Act better reflects the emphasis of the amended Act on the corporate and statutory functions of the Board. The Board has also been given additional functions, namely the *management* of the national parks and nature reserves; the planning, designing, development, management and maintenance of *public parks*; and the propagation, protection and preservation of the animals, plants and *other organisms* of Singapore.<sup>55</sup> This leaves the Commissioner to deal with greenery conservation and regulatory issues relating to nature reserves, national parks, and public parks under the new Act.

16 The Minister's power to add to, remove, or amend the designation of national parks and nature reserves has also been transferred from the National Parks Act<sup>56</sup> to the new Act.<sup>57</sup> Likewise, the provision setting out the purposes for which national parks and nature reserves may be set aside has been transferred from the National Parks Act<sup>58</sup> to the new Act.<sup>59</sup> The new Act clarifies that national parks and nature reserves may be set aside for the purpose of propagating, protecting and preserving the plants and animals of Singapore, *whether indigenous or otherwise*.<sup>60</sup>

54 Section 25(1) of the new Act. Approval for these requirements was previously obtained via the Urban Redevelopment Authority's development control approval and the Building Control Authority's building plan approval processes.

55 Section 6, National Parks Board Act, *supra* n 33.

56 Section 23(4) of the National Parks Act, *supra* n 33.

57 Section 62 of the new Act.

58 Section 23(3) of the National Parks Act, *supra* n 33.

59 Section 7(3) of the new Act.

60 *Id*, s 7(3)(a). The intention behind the explicit reference to non-indigenous species is presumably to provide for the propagation, protection, and preservation of exotic species that have been "naturalised" into the indigenous environment and thus become part of the "plants and animals of Singapore".

### III. Safeguarding the ecological integrity of our natural heritage

17 Bearing in mind law professor Alan Tan's observation that:<sup>61</sup>

... the relative inadequacy of nature conservation laws in Singapore has less to do with factors typical in other countries such as the voracious appetite of unscrupulous developers or administrative deadlock but more with the belief that land scarcity demands nature's ultimate sacrifice

and the observation by urban studies researcher Ooi Giok Ling that:<sup>62</sup>

[t]he State has been largely ambivalent toward nature conservation in the rapidly industrializing and urbanizing city-state of Singapore. ... Both the colonial state and the independent nation-state have had highly flexible interpretation of the legislation for nature protection. The colonial economy and that of the modern city-state have been singlemindedly focused on the need for economic growth that in this tiny island-state has meant the maximum possible exploitation of land resources to develop the supporting infrastructure for such growth. Local citizenry and citizens groups are, however, waging a struggle to save the remaining reserves, albeit with enormous difficulties. This struggle has involved the carrying out of environmental impact assessment on the biodiversity in nature reserves and in many senses functioning as the state would have done if it had been more committed to the legislation that has been in existence for the protection of the city-state's nature reserves

it may be inadequate to protect our natural heritage simply by gazetting nature areas as national parks and nature reserves and leaving its fate to the vagaries of political will, trusting that all will be well thereafter. It is not inconceivable that those entrusted with the stewardship of our natural heritage may, in the face of increasing affluence resulting in severe socio-economic pressure for development in land-scarce Singapore, find it expedient to sacrifice the ecological integrity of our natural heritage from time to time in the name of urban or economic development. More can and should be done to protect our natural heritage.

61 Alan Tan Khee Jin, "Reconciling Environmental and Developmental Imperatives in Singapore and Cross-Border Environmental Protection in ASEAN", p 3, paper presented at the International Conference on ASEAN Legal Systems and Regional Integration, Asia-Europe Institute, University of Malaya, Kuala Lumpur, Malaysia, 3-4 September 2001, available online at <<http://law.nus.edu.sg/apcel/publications/pub/tankheejin/klconf0901.pdf>> (accessed 28 March 2006).

62 Ooi Giok Ling, "The Role of the State in Nature Conservation in Singapore" (2002) *Society and Natural Resources* 15(5): 455-460, at 459-460.

18 For a start, the provision for appeal against a decision by the Commissioner to grant approval for a restricted activity in a national park or nature reserve should be restored. This would remove an unintended incentive to the Commissioner to adopt a pro-approval approach in his consideration of applications to carry out these restricted activities and encourage the Commissioner to take a more “neutral” approach.

19 In addition, the new Act could have introduced provisions to ensure that nature conservation is explicitly given appropriate weight in decision-making. This would be consistent with Singapore’s obligations under Art 8(c) of the Convention on Biological Diversity 1992<sup>63</sup> to, as far as possible and as appropriate:

[r]egulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, *with a view to ensuring their conservation and sustainable use*[.]  
[emphasis added]

20 Similarly, although the Minister’s power to amend the Schedule has been transferred from the National Parks Act to the new Act, there is no change to the scope of this power. In particular, the Schedule marking out the national parks and nature reserves may only be amended by the Minister, after consultation with the Board. Any order to amend the Schedule must be presented to Parliament as soon as possible after publication in the *Gazette*.<sup>64</sup> Presumably, the Board will, when consulted on a proposed amendment to the Schedule by the Minister, give its views with reference to its own statutory functions, as set out in s 6 of the National Parks Board Act,<sup>65</sup> and taking into consideration the purpose or purposes for which land is set aside as national parks and nature reserves, as set out in s 7(3) of the new Act. The statutory protection given to national parks and nature reserves could be strengthened by requiring that the Board’s advice be made public and that the public be consulted prior to any amendment to the Schedule. This would improve the transparency and openness of the Minister’s decision. To complement its advisory role in respect of the amendment of the Schedule, the Board’s role should be extended to include taking the initiative to propose for the Minister’s consideration, from time to time, new sites for inclusion as nature reserves in accordance with prescribed ecological and other

63 *Supra* n 17.

64 Section 62 of the new Act.

65 *Supra* n 33.

criteria. These proposals, along with the Minister's considered response, should be made public to promote transparency and accountability.

#### IV. Environmental impact assessments

21 The requirement for mandatory environmental impact assessments for development projects likely to adversely affect the ecological integrity or biodiversity of Singapore could act as a further legal safeguard and would go a long way towards protecting our natural heritage from unnecessary dissipation. Indeed, Nominated Member of Parliament Dr Geh Min made such a proposal during the Second Reading of the Parks and Trees Bill<sup>66</sup> but it was rejected by the Minister.<sup>67</sup> The absence of legislation to mandate an environmental impact assessment before activities likely to have significant adverse impacts on the environment has long been criticised.<sup>68</sup> As a tool for ensuring that ecological considerations are properly taken account of, environmental impact assessments are now mandatory requirements in many jurisdictions. These are public processes initiated by an application for a permit or approval, or by the legislative process. While it is true that these processes do not inherently guarantee that a proposed development that is ecologically harmful will necessarily be rejected, they do at least impose a requirement for the formal, systematic and public consideration of the impact of the proposed development on natural systems.

22 The need for environmental impact assessment has been recognised in a number of international and domestic legal instruments. For example, Principle 17 of the Rio Declaration on Environment and Development 1992<sup>69</sup> provides:

Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

66 *Supra* n 34.

67 *Singapore Parliamentary Debates, Official Report, supra* n 35.

68 See for example, Koh, "The Garden City and Beyond: The Legal Framework", *supra* n 9, at pp 166–167; and Foo Kim Boon, Lye Lin Heng and Koh Kheng Lian, "Environmental Protection: The Legal Framework" in *Environment and the City, supra* n 4, at pp 47, 87. See also the speech by Nominated Member of Parliament Simon Tay during the Second Reading of the Environmental Pollution Control Bill, *Singapore Parliamentary Debates, Official Report* (11 February 1999) vol 69 at col 2000.

69 Adopted on 14 June 1992 by the United Nations Conference on Environment and Development (A/CONF151/26, vol I and corr 1, resolution 1 and annex I).

23 Article 14(1)(a) of the Convention on Biological Biodiversity 1992 also requires its Contracting Parties, as far as possible and as appropriate, to:

[i]Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures[.]

24 Within the Association of South East Asian Nations (“ASEAN”), the value of environmental impact assessments has also long been recognised. Article 14(1) of the ASEAN Agreement on the Conservation of Nature and Natural Resources 1985 (that has yet to come into force) provides:<sup>70</sup>

The Contracting Parties undertake that proposals for any activity which may significantly affect the natural environment shall as far as possible be subjected to an assessment of their consequences before they are adopted, and they shall take into consideration the results of this assessment in their decision-making process.

25 As explained by the Second Minister for National Development at the Second Reading of the Parks and Trees Bill,<sup>71</sup> the Government does not deny the merits of mandatory environmental assessment legislation *per se*. Its concern rather is with the formalisation of environmental assessments and the provision for public participation, requirements that are usually included in such legislation. In its opinion, it has managed the process of balancing the twin goals of meeting human needs and nature conservation well, and formalising environmental impact assessment and institutionalising public consultation would instead lead to “more dialogue and more disagreements”, and not lead to a harmonisation of both goals.<sup>72</sup>

26 With due respect to the Minister, public participation in environmental impact assessments is a fundamental component of the assessment process in many jurisdictions. Its contribution to the quality of such assessments has also been recognised in international law and is

70 Signed at Kuala Lumpur on 9 July 1985, text available at <<http://www.aseansec.org/1490.htm>> (accessed 28 March 2006).

71 *Supra* n 34.

72 *Singapore Parliamentary Debates, Official Report, supra* n 35.

no longer disputed.<sup>73</sup> Aside from the educational benefits of public participation in environmental assessment, the public's ability to help better predict and evaluate the environmental impact, and identify ecologically friendly alternatives and mitigation measures cannot be underestimated. In addition, public participation also provides the political legitimacy for value judgments about whether the ecological costs of proposed developments are justified. Finally, public participation in the environmental impact assessment enhances openness and accountability and ensures that the stewards of our natural heritage do not simply choose the expedient path when confronted with difficult choices between development and conservation.

## V. Conclusion

27 Singapore has done remarkably well in balancing its urban and industrial development with its nature conservation, and the law has played a significant role in its success in this regard. All things considered, the new Act is a positive contribution to the legal framework for nature conservation. In particular, the formal creation of new designations such as the heritage road green buffer will extend nature conservation schemes to more natural areas. Enhancing the maximum fines will serve as a stronger deterrent against the carrying out of activities that are potentially harmful to protected flora and fauna. The elevation of the greening requirements for building plan approval from an administrative to a legal status is a formal recognition of its importance.

28 I have submitted, however, that the law can and should play a bigger role in guiding this garden city towards a deeper shade of green. It is necessary but not sufficient that those to whom we have entrusted our natural heritage are conferred sufficient powers to facilitate the discharge of their function. The law can explicitly impress on the stewardship function a legal duty to give due consideration to ecological integrity and

73 For example, Principle 10 of the Rio Declaration on Environment and Development 1992, *supra* n 70, provides that:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

biodiversity. In addition, the law can improve the ecological quality of the exercise of stewardship by providing for greater openness, transparency and accountability in the decision-making process. It is hoped that the Parks and Trees Act 2005 can be further enhanced to fulfil this role.

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