

# Public Document Pack

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Dear Councillor

**PLANNING COMMITTEE - TUESDAY, 8TH MARCH, 2016**

Please find attached the Update Note for the Tuesday, 8th March, 2016 meeting of the Planning Committee, forwarded to Members under separate cover.

Please note that there is no public speakers list for this meeting as no requests to speak have been received.

Yours sincerely

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**Planning Application Reports – Update Note**

Listed below are changes to the planning reports made as a result of additional information received since the publication of the agenda for this meeting.

<b>Case:</b> Year:	<b>Address:</b>	<b>Update:</b>
15/0842	LAND BOUNDED BY STIRLING ROAD, MATHER STREET, COLLINGWOOD AVENUE AND REAR OF ADDISON CRESCENT (QUEENS PARK & LAYTON RECREATION GROUND), BLACKPOOL	<p>Following development of the detailed drainage network design throughout the site, an adjustment is required to tie into the existing system, which has in turn had an impact on the previously proposed building finished floor levels. The finished floor levels to the plots furthest from the proposed point of drainage connection in Laycock Gate have had to be lifted in order to ensure enough fall at compliant gradients is achieved across the site. The drainage strategy proposed at planning stage, and originally consulted with United Utilities, has not changed in principle, it is a revision so the drainage gradients and falls comply across the site.</p> <p>During detailed design (post submission), the proposed Foul Water connection was missing the existing manhole connection depth. In order to mitigate this level difference, the plots at the head of the new Foul Water system required lifting so that the design worked hydraulically. The impact on the finished floor levels is:</p> <p>Plots135-137 +100mm            Plot 191 +400mm            Plots 189-190 +900mm            Plots 187-188 +450mm            Plot 186 +150mm            Plots 172-178 +200mm            Plots 165-171 +220mm            Plots 162-164 +250mm</p>

		<p>The small increase in heights would hardly be noticeable from public viewpoints. The most impact would be on 49 Addison Crescent (the rear garden of which is immediately adjacent to plot 109) and would result in the gable wall to the property on plot 109 being 900mm higher than originally proposed. However, 49 Addison Crescent has a long rear garden, is at a raised height compared to the development site, and is to the south west, so the impact in terms of loss of daylight and over dominance would not be so significant as to justify refusal. The proposed gable wall is blank, so there would be no issue with privacy either.</p> <p>The affected neighbours on Addison Crescent (39 – 57 odds) have been notified about the amendments and the recommendation is to defer and delegate approval to the Head of Development Management, subject to the receipt of no significant objections from them within the 14 day consultation period (from 1<sup>st</sup> March).</p> <p>3 of the original submission drawings are replaced:</p> <ul style="list-style-type: none"> <li>• LPL35Ph2-100B (Proposed Drainage Layout) replaced by LPL35Ph2 -101A</li> <li>• LPL35Ph2 -002E (Proposed Finish Floor Levels) replaced by LPL35Ph2 -102A</li> <li>• 12-062-366A (Proposed Site Sections and Streetscapes, Sheet 2of2) replaced by 12-062-366B.</li> </ul> <p>Subject to Committee’s acceptance of the proposal, the Council will commission the landscape architects for the scheme (TEP) to produce a layout for Layton Recreation Ground in consultation with the Parks and Recreation department. The current suggestion is to plough and plant meadow grass with wild flowers at the south end of the site where the land is dampest. Semi-formal planting would be between this and formal planting which would be closest to the houses. Footpaths would run throughout the greenspace. It is anticipated that Blackpool Coastal Housing would be responsible for maintenance of the formal planting.</p> <p>1<sup>st</sup> March – comments received from the Head of Transportation: The principal of development is accepted.</p> <p>1. The estate roads to be formally adopted under a S38 agreement. Details relating to limits of adoptions, construction, materials, lighting, surface water drainage to be discussed with Highways and Traffic, Blackpool Council with a view to obtaining an acceptable scheme.</p>
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		<ol style="list-style-type: none"> <li>2. The paths within the open space and to the rear (or front) of plots 165 to 190 will not be taken over by the Highway Authority for future maintenance.</li> <li>3. The stopping-up of areas of the public highway to be undertaken via the Town and Country Planning Act.</li> <li>4. Street lighting proposals to be discussed and scope of work agreed with the PFI contractor with a view to delivering an acceptable lighting scheme.</li> <li>5. How is surface water to be discharged for the new units?</li> <li>6. Tie-ins between new and existing highway areas to be done to acceptable standards.</li> <li>7. Tree planting on the public highway will not be supported as single trees may not survive and maintenance will be a problem in future years.</li> <li>8. There is a loss to car parking provision in comparison to existing parking levels. Effectively, one car parking space per unit is provided. If in the future, the occupancy of the units is to change as the units can be adapted to accommodate young families and the reliance on the private car is greater, there may be a short fall. How is this to be managed?</li> <li>9. Tracking details that have been provided but only for private vehicles. A similar exercise must be undertaken for refuse collection vehicles (the largest is 11m x 3m).</li> <li>10. The refuse collection and strategy to be discussed and agreed with the Head of Waste Services.</li> <li>11. A Construction Management Plan to be conditioned.</li> <li>12. A separate condition to be included for wheel washing measures during construction with 15m of hardstanding being available to wash vehicles down.</li> <li>13. A joint dilapidation survey to be carried out prior to commencement of the works.</li> <li>14. The development will require formal postal addresses.</li> <li>15. The development will require formal postal addresses, applicant to contact the Head of Transportation.</li> </ol> <p>Objection from 32 Addison Crescent: The planning officer states that "The proposal involves the demolition of the existing Blackpool Boys and Girls Club and the loss of the current Queens Park Community Centre. Although the information has not been submitted with the application, I am aware that the Council is working closely with the Boys and Girls Club to explore options to relocate the facility and as an interim measure has temporarily located them in the Victory Road neighbourhood offices."</p>
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		<p>Having spoken to various members and volunteers from the Club the council seems to have done nothing whatsoever to help find a new building for the Club! I have been down to visited on a busy Wednesday evening to see about 40 plus disabled people being catered for in a very small building not much bigger than my double garage at home. The staff seem to be doing their best to provide a youth club despite the limitations of the building when compared to wonderful spacious building they lost when the council decided to bulldoze it for a new house to be built. I would be pleased to read how the Council is working closely to re-locate this caring club.</p>
15/0868	BLACKPOOL ZOO	<p>The EC Zoos Directive (Directive 1999/22/EC) requires EU Member States to regulate zoos in accordance with its provisions. The Directive is transposed into national legislation in England by means of the Zoo Licensing Act 1981 (Amendment) (England and Wales) Regulations 2002. Defra issued guidance on the provisions of the Zoo Licensing Act 1981 in 2012 in a document called “Secretary of State’s Standards of Modern Zoo Practice” and part 8.8 specifically relates to elephant welfare <sup>1</sup>.</p> <p>In terms of space standards, the minimum area for an internal pen is 200sqm for up to 4 elephants and a bull pen must be a minimum of 80sqm. The preferred flooring is deep sand. The proposed elephant house would have a total of 1,254sqm of floor area for the elephants, divided into one large pen (664sqm) and 4 smaller pens, the smallest being 97sqm. All floors in the pens would have 1.2m depth of sand.</p> <p>Externally, the minimum requirements are for 2000sqm for 8 females, 3000sqm for males and females and should include a bathing pool, dust baths and mud wallows. The proposal includes 7890sqm including a 500sqm bull paddock, a 1260sqm sand paddock including a pool and waterfall and a 6130sqm grass paddock.</p> <p>These minimum requirements are also set out in the British and Irish Association of Zoos and Aquariums (BIAZA) “Management Guidelines for the Welfare of Zoo Animals” (3rd Edition)<sup>2</sup>. Blackpool Zoo is a member of BIAZA.</p>

<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69596/standards-of-zoo-practice.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69596/standards-of-zoo-practice.pdf)

<sup>2</sup> [http://www.santuariodeelefantes.org.br/docs/BIAZA\\_management\\_guidelines\\_elephants\\_2010.pdf](http://www.santuariodeelefantes.org.br/docs/BIAZA_management_guidelines_elephants_2010.pdf)

		<p>Under the Zoo Licensing Act, the Council is required to inspect the Zoo every three years along with Secretary of State appointed and Council appointed vets. Less formal inspections are carried out annually.</p> <p>There is also a Zoo Ethics Committee which meets every 6 months to discuss all manner of animal welfare issues. The provision of a new Elephant House has been discussed in depth at previous meeting and the scheme has been developed with elephant welfare and public safety as the primary considerations.</p> <p>A letter has been submitted from the Director of Blackpool Zoo in response to the volume of objections relating to animal welfare and issues surrounding keeping elephants in captivity along with the IUCN Red List of Threatened Species. These documents are appended to the Update Note.</p> <p>Additional objections have been received regarding elephant welfare but no new issues have been raised. The total number of objections stands at 84.</p> <p>In addition a petition containing 8150 signatures has been received and the covering letter states –</p> <p><i>To Blackpool Council:</i></p> <p><b>Re: Planning Application 15/0868 to build a new elephant enclosure at Blackpool Zoo</b></p> <p><i>We are writing to urge you to reject a planning application submitted by Blackpool Zoo to build a new elephant enclosure.</i></p> <p><i>Elephants are highly intelligent, sensitive animals whose needs cannot be adequately met in captivity. In the wild, Asian elephants roam huge distances and live in complex family groups. In zoos, they are forced to spend their entire lives behind bars, alone or in artificially created groupings, often displaying stereotypic behaviour, known as "zoochosis", because of boredom and frustration.</i></p> <p><i>Two elephants have died at Blackpool Zoo since 2014. Rather than condemning future generations of elephants to this miserable existence, Blackpool Zoo should phase out elephant displays altogether and retire its one remaining elephant, Kate, to a sanctuary.</i></p>
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25/02/2016

Dear Sirs,

The Asian Elephant '*Elephas maximus*' is classified by the International Union for the Conservation of Nature (IUCN) as 'Endangered' in the wild according to its Red List categories.

Working under the umbrella of the 'European Association of Zoos and Aquaria' (EAZA), Blackpool Zoo, like many other good European zoos, participates in both *ex-situ* and *in-situ* conservation of the animals within our care.

We have a long standing association with Asian elephants both within the zoo (this was one of the first species to be exhibited in the zoo over 40 years ago) and by actively supporting *in-situ* conservation via the 'Biodiversity and Elephant Conservation Trust' (BECT) in Sri Lanka for well over a decade, providing funds and raising public awareness of the work that is carried out in this home range country to educate and assist local people who are affected by the human – elephant conflict in the region.

As a part of the EAZA Elephant 'Taxonomic Advisory Group' (TAG) 'European Endangered Species breeding programme' (EEP) for Asian elephants, Blackpool Zoo follows and endorses the TAG's 'mission statement' for this species:

**'All elephants held globally under human care in zoological gardens can be regarded as iconic, flagship animals helping raise the awareness of the plight of the elephant to the zoo going public. Due to their intellect, longevity and social awareness elephants are ambassadors that generate immediate empathy from zoo visitors and while there are no immediate plans to return elephants back to the wild, their role under human care in terms of profiling education, conservation and research cannot be overstated.'**

**The goals of the elephant TAG are to have a self-sustaining population under human care. Within this remit, social, physical and psychological needs must be adequately catered for and standards of excellence in terms of general husbandry, medical welfare – including research into prevalent disease, along with conservation breeding, are pivotal as the corner to maintaining this species under human care'.**





Blackpool Zoo is, therefore, committed to improving the welfare of its elephants both present and future, and, with this in mind, we are planning to build a new, state of the art facility on a large area of previously unused land within the park. The new house and paddock, which will be one of the largest in the UK, will offer an extensive outdoor enclosure with a pool, a grazing field and a spacious indoor area which will exceed welfare recommendations and safety standards for the elephants and their keepers.

Whilst we are committed to the long term future of our current elephant, Kate, whose welfare and well-being is paramount, her future and that of other elephants residing within this new facility will ultimately be decided upon by the EEP for this species.

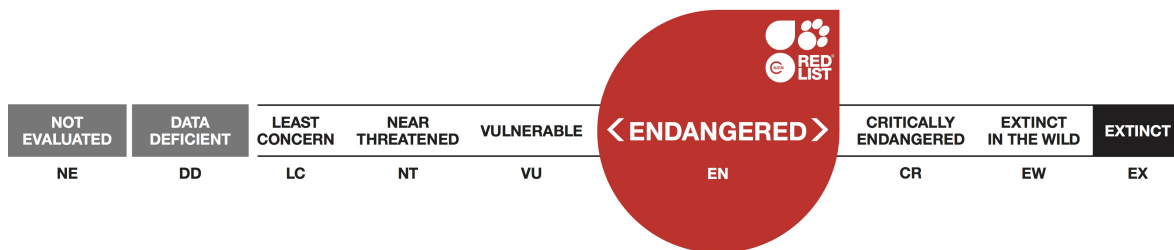
Blackpool Zoo is certain that, with the development of this new facility, it will not only enhance the current welfare of its existing elephant, but will offer the captive population of elephants within Europe a facility that will help to achieve the aims and target population required to act as a safety net for this iconic endangered species.

Yours Sincerely

Darren Webster  
Zoo Director

## *Elephas maximus*, Asian Elephant

Assessment by: Choudhury, A. *et al.*



View on [www.iucnredlist.org](http://www.iucnredlist.org)

**Short citation:** Choudhury, A. *et al.* 2008. *Elephas maximus*. *The IUCN Red List of Threatened Species 2008*: e.T7140A12828813.

<http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T7140A12828813.en> [see full citation at end]

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## Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Proboscidea	Elephantidae

**Taxon Name:** *Elephas maximus* Linnaeus, 1758

### Infra-specific Taxa Assessed:

- [Elephas maximus ssp. sumatranus](#)

### Common Name(s):

- English: Asian Elephant, Indian Elephant
- French: Eléphant D'Asie, Eléphant D'Inde
- Spanish: Elefante Asiático

### Taxonomic Notes:

While subspecies taxonomy of *Elephas maximus* has varied among authors, the most recent treatment (Shoshani and Eisenberg 1982) recognizes three subspecies: *E. m. indicus* on the Asian mainland, *E. m. maximus* on Sri Lanka, and *E. m. sumatranus* on the Indonesian island of Sumatra. Borneo's elephants have traditionally been included in *E. m. indicus* (Shoshani and Eisenberg 1982) or *E. m. sumatranus* (Medway 1977; but see Fernando *et al.* 2003 and Cranbrook *et al.* 2008 for discussion of whether the elephants of Borneo are indigenous to the island). These subspecies designations were based primarily on body size and minor differences in coloration, plus the fact that *E. m. sumatranus* has relatively larger ears and an extra pair of ribs (Shoshani and Eisenberg 1982). The Sri Lankan subspecies designation is weakly supported by analysis of allozyme loci (Nozawa and Shotake 1990), but not by analysis of mitochondrial DNA (mtDNA) sequences (Hartl *et al.* 1996, Fernando *et al.* 2000, Fleischer *et al.* 2001). However, current patterns of mtDNA variation suggest that the Sumatran subspecies is monophyletic (Fleischer *et al.* 2001), and consequently this taxon could be defined as an evolutionarily significant unit (ESU). This suggests that Sumatran elephants should be managed separately from other Asian elephants in captivity, and is also an argument for according particularly high priority to the conservation of Sumatran elephants in the wild. The status of evolutionarily significant unit has also been suggested for the Bornean elephants (Fernando *et al.* 2003). Two other proposed subspecies *E. m. asurus* and *E. m. rubridens* are extinct. A definitive subspecific classification awaits a detailed range-wide morphometric and genetic study.

## Assessment Information

**Red List Category & Criteria:** Endangered A2c [ver 3.1](#)

**Year Published:** 2008

**Date Assessed:** June 30, 2008

### Justification:

Listed as Endangered (EN) because of a population size reduction inferred to be at least 50% over the last three generations, based on a reduction in its area of occupancy and the quality of its habitat. Although there are few accurate data on historical population size, from what is known about trends in

habitat loss/degradation and other threats including poaching, an overall population decline of at least 50% over the last three generations (estimated to be 60–75 years, based on a generation time estimated to be 20–25 years) seems realistic.

### Previously Published Red List Assessments

1996 – Endangered (EN)

1994 – Endangered (E)

1990 – Endangered (E)

1988 – Endangered (E)

1986 – Endangered (E)

1965 – Very rare but believed to be stable or increasing

## Geographic Range

### Range Description:

Asian elephants formerly ranged from West Asia along the Iranian coast into the Indian subcontinent, eastwards into South-east Asia including Sumatra, Java, and Borneo, and into China at least as far as the Yangtze-Kiang. This former range covered over 9 million km<sup>2</sup> (Sukumar 2003). Asian elephants are now extinct in West Asia, Java, and most of China. The western populations (*Elephas maximus asurus*) were probably extinct by 100 BC, and the main Chinese populations (sometimes referred to as *E. m. rubridens*) disappeared sometime after the 14th century BC. Even within its surviving range in South and South-east Asia, the species has been in retreat for hundreds if not thousands of years, and generally survives only in highly fragmented populations (Olivier 1978; Sukumar 2003; Blake and Hedges 2004).

Asian elephants still occur in isolated populations in 13 states, with a very approximate total range area of 486,800 km<sup>2</sup> (Sukumar 2003; but see Blake and Hedges 2004). The species occurs in Bangladesh, Bhutan, India, Nepal, and Sri Lanka in South Asia and Cambodia, China, Indonesia (Kalimantan and Sumatra) Lao PDR, Malaysia (Peninsular Malaysia and Sabah), Myanmar, Thailand, and Viet Nam in South-east Asia. Feral populations occur on some of the Andaman Islands (India).

The elephants of Borneo were believed to be feral descendants of elephants introduced in the 14th–19th centuries (Shoshani and Eisenberg, 1982; Cranbrook *et al.*, 2008); however, recent genetic evidence suggests they are indigenous to the island (Fernando *et al.*, 2003; but see Cranbrook *et al.*, 2008).

The species was once found throughout Sri Lanka, but today elephants are restricted mostly to the lowlands in the dry zone where they are still fairly widespread in north, south, east, north-western, north-central and south-eastern Sri Lanka; but with the exceptions of small remnant populations in the Peak Wilderness Area and Sinharaja Area, elephants are absent from the wet zone of the country. The species continues to lose range to development activities throughout the island.

Once widespread in India, the species is now restricted to four general areas: northeastern India, central India, northwestern India, and southern India. In northeastern India, the elephant range extends from

the eastern border of Nepal in northern West Bengal through western Assam along the Himalaya foothills as far as the Mishmi Hills. From here it extends into eastern Arunachal Pradesh, the plains of upper Assam, and the foothills of Nagaland. Further west, it extends to the Garo Hills of Meghalaya through the Khasi Hills, to parts of the lower Brahmaputra plains and Karbi Plateau. Elsewhere in the south in Tripura, Mizoram, Manipur, and the Barak valley districts of Assam, isolated herds occur (Choudhury, 1999). In central India, highly fragmented elephant populations are found in the States of Orissa, Jharkhand, and the southern part of West Bengal, with some animals wandering into Chattisgarh. In north-western India, the species occurs in six fragmented populations at the foot of the Himalayas in Uttaranchal and Uttar Pradesh, ranging from Katerniaghat Wildlife Sanctuary in Bahraich Forest Division in the east, to the Yamuna River in the west. In southern India, elephants occur in the hilly terrain of the Western Ghats and in parts of the Eastern Ghats in the states of Karnataka, Kerala, Tamil Nadu, and, relatively recently, Andhra Pradesh. There are eight main populations in southern India, each fragmented from the others: northern Karnataka; the crestline of Karnataka–Western Ghats; Bhadra–Malnad; Brahmagiri–Nilgiris–Eastern Ghats; Nilambur–Silent Valley–Coimbatore; Anamalais–Parambikulam; Periyar–Srivilliputhur; and Agasthyamalais.

In Nepal, elephants were once widespread in the lowland Terai, but are now restricted to a few protected areas along the border with India: Royal Chitwan National Park, Parsa Wildlife Reserve, Royal Bardia National Park, and Royal Suklaphanta Wildlife Reserve, and their environs. There is some movement of animals between these protected areas and between Bardia National Park and the adjacent parts of India.

In Bhutan, all the existing elephant populations are found along the border with India. They are reported from Royal Manas National Park, Namgyal Wangchuk Wildlife Sanctuary, Phipsoo Wildlife Sanctuary, and the Reserve Forests such as Khaling Wildlife Sanctuary, Dungsum, and Mochu. In the past, elephants made seasonal migrations from Bhutan to the grasslands of India during the wetter summer months of May to October, returning to their winter range in Bhutan from November. Now these movements are restricted as a result of loss of habitat on the Indian side and fragmentation of habitat on the Bhutan side.

In Bangladesh, the species was once widespread, but today it is largely restricted to areas that are relatively less accessible to humans, mainly Chittagong and the Chittagong Hill Tracts in the southeast. In addition, some animals periodically visit the New Samanbag area of Maulvi Bazar District under the Sylhet Forest Division in the north-east of the country, coming from the neighbouring Indian states of Tripura, Meghalaya, and Assam.

The Asian elephant has a wide, but highly fragmented, distribution in Myanmar. The five main areas of elephant abundance are: the Northern Hill Ranges, the Western Hill Ranges, Pegu Yoma (central Myanmar), Tenasserim Yoma (in the south, bordering Thailand), and Shan State or eastern Yoma.

In Thailand, the species occurs mainly in the mountains along the border with Myanmar, with smaller fragmented populations occurring in the peninsula in the south (in several forest complexes, south to the border with Malaysia); in the northeast (in the Dong Phrayayen-Khao Yai forest complex, including Khao Yai National Park, and the Phu Khieo-Nam Nao forest complex); and in the east (in a forest complex composing the Khao Ang Runai Wildlife Sanctuary, Khao Soi Dao Wildlife Sanctuary, Khao Khitchakut National Park, and Khao Cha Mao National Park).

In Cambodia, elephants are primarily found in the mountains of the south-west and in Monduliri and Ratanakiri Provinces. Recent surveys in Keo Sema District (Monduliri Province) suggest that important numbers may remain in that area (WCS unpubl. data). Elsewhere, Asian elephants persist in Cambodia in only small, scattered populations (Duckworth and Hedges, 1998).

In the Lao People's Democratic Republic, elephants remain widely but very patchily distributed in forested areas, both in the highlands and lowlands. Two important and likely viable populations are known, one in Xaignaboli Province west of the Mekong and one on the Nakai Plateau. Other potentially important elephant populations occur in Phou Phanang and Phou Khao Khoay in Vientiane Province; Phou Xang He in Savannakhet Province; Dong Ampham and Dong Khanthung, including Xe Pian, close to Cambodian border; and Nam Et, Nam Xam, Phou Dendin, and Nam Ha in the north, close to the Viet Nameese and Chinese borders.

In Viet Nam, only a small population persists now. In the northern part of the country there are no elephants left, barring occasional wanderers into Son La from Lao PDR. In the central and southern parts of the country, very small isolated populations remain in Dak Lak, Nghe An, Quang Nam, Dong Nai, and Ha Tinh Provinces.

In China, Asian elephants once ranged widely over much of southern China, including the Fujiang, Guangdong, and Guangxi Provinces (Smith and MacKinnon, in press). The species was extirpated in southern Fujiang and northern Guangdong during the 12th century, but evidence indicates persistence in Guanxi into the 17th century (Smith and MacKinnon, in press). All that now remains of this once widespread elephant population in China is the remnant in Yunnan where the species survives in three prefectures: Xishuangbanna, Simao, and Lincang.

In Peninsular Malaysia, the species is still widely distributed in the interior of the country in the following States: Pahang (which probably has the largest population), Perak, Johor, Kelantan, Terengganu, Kedah, and Negeri Sembilan (where very few animals remain).

On Borneo, elephants only occur in the lowlands of the northeastern part of the island in the Malaysian State of Sabah and adjacent parts of Kalimantan (Indonesia). In Sabah, they occur in forested areas in the south, centre, and east of the State in the following Districts: Kinabatangan, Sandakan, Beluran, Lahad Datu, Tawau, and Pensiangan. In Kalimantan, elephants occur only in the Upper Sembakung River in Tindung District. The origin of the elephants of Borneo remains unclear and the subject of debate. Due to the limited distribution of the island's elephant population it is argued by some that the species was not indigenous, but descended from imported captive elephants (Medway 1977; Cranbrook *et al.*, 2008). However, others argues that while captive elephants have undoubtedly been brought to Borneo, genetic analyses have shown that the elephants found on Borneo are genetically distinct, with molecular divergence indicating a Pleistocene colonization and subsequent isolation (Fernando *et al.*, 2003)

On Sumatra (in Indonesia), the elephant was once widespread, but now survives only in highly fragmented populations. In the mid-1980s, 44 discrete elephant populations were known to exist in Sumatra's eight provinces, 12 of these were in Lampung Province (Blouch and Haryanto, 1984; Blouch and Simbolon, 1985). However, by 2003, only three of Lampung's 12 populations were extant (Hedges *et*

*al.*, 2005). An unknown number of Sumatra's other elephant populations remain (Blake and Hedges, 2004), and those that do are threatened by habitat loss, poaching, and as a result of conflict with humans (Santiapillai and Jackson, 1990; Hedges *et al.*, 2005). Nevertheless, the island is thought to hold some of the most significant populations outside of India. For example, recent surveys in Lampung Province's two national parks, Bukit Barisan Selatan and Way Kambas, produced population estimates of 498 (95% CI=[373, 666]) and 180 (95% CI=[144, 225]) elephants, respectively (Hedges *et al.*, 2005). Bukit Barisan Selatan NP is therefore a critically important area for Asian elephant conservation. The challenge now is to protect these populations from further habitat loss and poaching.

**Country Occurrence:**

**Native:** Bangladesh; Bhutan; Cambodia; China; India; Indonesia (Kalimantan, Sumatera); Lao People's Democratic Republic; Malaysia (Peninsular Malaysia, Sabah); Myanmar; Nepal; Sri Lanka; Thailand; Viet Nam

**Regionally extinct:** Pakistan



# Distribution Map

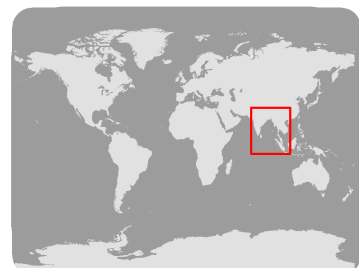


## *Elephas maximus*

Range

Extant (resident)

Compiled by:  
IUCN (International Union for Conservation of Nature)



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



## Population

A recent estimate for the global population size of the Asian elephant was 41,410–52,345 animals Sukumar (2003) The estimated population size for each country was: Bangladesh 150–250; Bhutan 250–500; Cambodia 250–600; China 200–250; India 26,390–30,770; Indonesia 2,400–3,400; Lao PDR 500–1,000; Malaysia 2,100–3,100; Myanmar 4,000–5,000; Nepal 100–125; Sri Lanka 2,500–4,000; Thailand 2,500–3,200; and Viet Nam 70–150 (Sukumar, 2003) . However, Blake and Hedges (2004) and Hedges (2006) argue that the oft-repeated global population ‘estimate’ of about 40,000 to 50,000 Asian elephants is no more than a crude guess, which has been accepted unchanged for a quarter of a century. They argue that with very few exceptions all we really know about the status of Asian elephants is the location of some (probably most) populations, with in some cases a crude idea of relative abundance; and for some large parts of the species range we do not even know where the populations are, or indeed if they are still extant. These difference of opinion are due in part to the difficulty in counting elephants in dense vegetation in difficult terrain, different survey techniques being used in different places, and a too-widely held belief that population monitoring is unimportant. Nevertheless, whatever the error margins, it appears almost certain that over 50% of the remaining wild Asian elephants occur in India.

The overall population trend of the Asian elephant has been downwards, probably for centuries. This remains the case in most parts of its range, but especially in most of the countries of South-east Asia. Within India, there is evidence that the large population in the Western Ghats in south of the country has been increasing in recent years due to improved conservation effectiveness.

**Current Population Trend:** Decreasing

## Habitat and Ecology (see Appendix for additional information)

Asian elephants are generalists and they occur in grassland, tropical evergreen forest, semi-evergreen forest, moist deciduous forest, dry deciduous forested and dry thorn forest, in addition to cultivated and secondary forests and scrublands. Over this range of habitat types elephants are seen from sea level to over 3,000 m asl. In the Eastern Himalaya in northeast India, they regularly move up above 3,000 m asl in summer at a few sites (Choudhury, 1999). The Asian elephant is one of the last few mega-herbivores (i.e. plant-eating mammals that reach an adult body weight in excess of 1,000 kg) still extant on earth (Owen-Smith, 1988). Given their physiology and energy requirements, elephants need to consume large quantities of food per day. They are generalists and browse and graze on a variety of plants. The proportions of the different plant types in their diet vary depending upon the habitat and season. During dry season in southern India, Sukumar (1992) observed that 70% of the elephant's diet was browse, while in wet season, grasses make up about 55%. However, in an adjoining area, Baskaran (2002) observed that browse formed only 15% of the diet in dry deciduous forest and 47% of the diet in the thorn forest in the dry season, while the annual diet was dominated by grass (84%). In Sri Lanka, elephants may feed on more than 60 species of plants belonging to 30 families (McKay, 1973). In southern India, Baskaran (2002) recorded that elephants fed on 82 species of plants (59 woody plant species and 23 grass species). Elephants may spend up to 14–19 hrs a day feeding, during which they may consume up to 150 kg of wet weight (Vancuylenberg, 1977). They defecate about 16–18 times a day, producing about 100 kg of dung. Dung also helps disperse germinating seeds.

Elephants range over large areas and home ranges in excess of 600 km<sup>2</sup> have been recorded for females

in south India (Baskaran *et al.*, 1995). In north India, female home ranges of 184–326 km<sup>2</sup> and male home ranges of 188–407 km<sup>2</sup> have been recorded (Williams, 2002). Smaller home range sizes, 30–160 km<sup>2</sup> for females and 53–345 km<sup>2</sup> for males, have been recorded in Sri Lanka (Fernando *et al.*, 2005). Given their requirements for large areas, elephants are regarded as an “umbrella species” because their conservation will also protect a large number of other species occupying the same area. They are also a premier “flagship species” and are sometimes regarded as a “keystone species” because of their important ecological role and impact on the environment.

The life span of Asian elephants is 60 to 70 years, and males reach sexual maturity at between 10–15 years of age; females usually first give birth in years 15 or 16 (Shoshani and Eisenberg, 1982).

**Systems:** Terrestrial

## **Use and Trade (see Appendix for additional information)**

The Asian elephant is hunted for ivory, food, leather and other products. Live animals are also removed from the wild and used in forestry operations and for ceremonial purposes.

## **Threats (see Appendix for additional information)**

The pre-eminent threats to the Asian elephant today are habitat loss, degradation, and fragmentation (Leimgruber *et al.*, 2003; Sukumar, 2003; Hedges, 2006), which are driven by an expanding human population, and lead in turn to increasing conflicts between humans and elephants when elephants eat or trample crops. Hundreds of people and elephants are killed annually as a result of such conflicts. The long-term future of elephants outside protected areas, as well as in some protected areas, is therefore inextricably linked to mitigating such human–elephant conflicts, and this is one of the largest conservation challenges in Asia today (Sukumar, 1992, 2003; Hedges 2006).

Asian elephants live in the region of the world with the densest human population, growing at a rate of between 1–3% per year. Because elephants require much larger areas of natural habitat than most other terrestrial mammals in Asia, they are one of the first species to suffer the consequences of habitat fragmentation and destruction and because of its great size and large food requirements, the elephant cannot co-exist with people in areas where agriculture is the dominant form of land-use. In extreme cases, elephants have been confined as so called ‘pocketed herds’ in small patches of forest in landscapes dominated by man. Such ‘pocketed herds’ represent an extreme stage in the human–elephant conflict (Olivier, 1978). In other cases elephants have been caught and taken to so-called Elephant Training Centres where they languish, lost to the wild population (Hedges *et al.*, 2005, 2006).

Poaching is a major threat to elephants in Asia too, although reliable estimates of the number of elephants killed and the quantities of ivory and other body parts collected and traded are scarce (Sukumar *et al.*, 1998; Milliken, 2005). It has been argued that poaching is a relatively minor threat to Asian elephant because some males and all females lack tusks (Dawson and Blackburn, 1991). However, the reality is that elephants are poached for a variety of other products (including meat and leather) in addition to ivory, and poaching is now acknowledged as a threat to the long-term survival of some Asian elephant populations (e.g. Kemf and Santiapillai, 2000; Menon, 2002). Moreover, poaching of elephants for ivory is a serious problem in some parts of Asia (Sukumar, 1992; Menon *et al.*, 1997). In Periyar Tiger

Reserve in southern India, for example, ivory poaching has dramatically skewed adult sex ratios: over the 20-year period from 1969 to 1989 the adult male:female sex ratio changed from 1:6 to 1:122 (Chandran, 1990). Selective removal of tusked males has several implications for the affected populations: sex ratios obviously become highly female biased, genetic variation is reduced, and fecundity and recruitment may decline (Sukumar *et al.*, 1998; Sukumar, 2003). Poaching of elephants is also a major problem in other parts of Asia. Large-scale hunting of elephants for ivory, bushmeat, hides, and other products has reduced their populations significantly over a wide area from Myanmar to Indonesia (Menon *et al.*, 1997; Duckworth and Hedges, 1998; Kemf and Santiapillai, 2000; Martin and Stiles, 2002; Menon, 2002; World Wide Fund for Nature, 2002a; Hedges *et al.*, 2005).

## **Conservation Actions (see Appendix for additional information)**

This species is listed on CITES Appendix I. The most important conservation priorities for the Asian elephant are: 1) conservation of the elephant's habitat and maintaining habitat connectivity by securing corridors; 2) the management of human–elephant conflicts as part of an integrated land-use policy that recognizes elephants as economic assets from which local people need to benefit or at least no suffer; 3) better protection to the species through improved legislation and law enforcement, improved and enhanced field patrolling, and regulating/curbing trade in ivory and other elephant products. Monitoring of conservation interventions is also needed to assess the success or failure of the interventions so that adjustments can be made as necessary (i.e. adaptive management). Reliable estimation of population size and trends will be needed as part of this monitoring and adaptive management approach.

## **Credits**

**Assessor(s):** Choudhury, A., Lahiri Choudhury, D.K., Desai, A., Duckworth, J.W., Easa, P.S., Johnsingh, A.J.T., Fernando, P., Hedges, S., Gunawardena, M., Kurt, F., Karanth, U., Lister, A., Menon, V., Riddle, H., Rübél, A. & Wikramanayake, E. (IUCN SSC Asian Elephant Specialist Group)

**Reviewer(s):** Hedges, S. & Desai, A. (Asian Elephant Red List Authority)

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## Appendix

### Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.5. Forest - Subtropical/Tropical Dry	-	Suitable	Yes
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	-	Suitable	Yes
1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane	-	Suitable	Yes
3. Shrubland -> 3.5. Shrubland - Subtropical/Tropical Dry	-	Suitable	Yes
3. Shrubland -> 3.6. Shrubland - Subtropical/Tropical Moist	-	Suitable	Yes
4. Grassland -> 4.5. Grassland - Subtropical/Tropical Dry	-	Suitable	Yes
4. Grassland -> 4.6. Grassland - Subtropical/Tropical Seasonally Wet/Flooded	-	Suitable	Yes
14. Artificial/Terrestrial -> 14.3. Artificial/Terrestrial - Plantations	-	Marginal	-
14. Artificial/Terrestrial -> 14.6. Artificial/Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest	-	Marginal	-

### Use and Trade

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

End Use	Local	National	International
Food - human	Yes	No	No
Wearing apparel, accessories	Yes	Yes	Yes
Handicrafts, jewellery, etc.	Yes	Yes	Yes
Pets/display animals, horticulture	Yes	Yes	No

### Threats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		



2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.1. Intentional use (species is the target)	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.3. Persecution/control	Ongoing	-	-	-
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.5. Motivation Unknown/Unrecorded	Ongoing	-	-	-
	Stresses:	1. Ecosystem stresses -> 1.2. Ecosystem degradation		

## Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

<b>Conservation Actions in Place</b>
In-Place Land/Water Protection and Management
Conservation sites identified: Yes, over entire range
In-Place Species Management
Subject to ex-situ conservation: Yes
In-Place Education
Subject to recent education and awareness programmes: Yes
Included in international legislation: Yes
Subject to any international management/trade controls: Yes

## Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Actions Needed
1. Land/water protection -> 1.1. Site/area protection
1. Land/water protection -> 1.2. Resource & habitat protection
2. Land/water management -> 2.1. Site/area management
2. Land/water management -> 2.3. Habitat & natural process restoration
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management
3. Species management -> 3.1. Species management -> 3.1.2. Trade management
4. Education & awareness -> 4.2. Training
4. Education & awareness -> 4.3. Awareness & communications
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.1. International level
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level

## Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
1. Research -> 1.1. Taxonomy
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
3. Monitoring -> 3.1. Population trends

## Additional Data Fields

Distribution
Lower elevation limit (m): 0
Upper elevation limit (m): 3000
Population
Population severely fragmented: Yes

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