

Conservation Zones

Fig 23

The National Football Centre
Environmental Assessment



are protected and enhanced. The following measures need to be given serious consideration:

- i. All the Veteran trees need to be protected and not affected by the development. This means that no extensive tree surgery work should be carried out. The lack of recent tree surgery on the standing trees is the one feature where the parkland is better than average.
- ii. Dead wood should be retained *in situ*, and a "need" for tidiness should be resisted.
- iii. Grazing should be retained around the veteran trees, but the intensity of exploitation should be greatly reduced. Fertility should be reduced; probably stopping fertiliser applications, but continuing to cut the grasslands for silage or hay until there is no worthwhile crop will best achieve this. Grazing should be light enough and so organised as to ensure the swards retain areas of taller vegetation. In the long term this will restore unimproved grassland.
- iv. Scrub should be retained to provide shelter for birds and crucial nectar sources for some insects associated with trees
- v. The eventual aim could be to return the park to a more semi-natural condition with natural regeneration of trees and Hawthorn replacing the need for planting, thus restoring true wood pasture conditions. There is already abundant mown tree regeneration in the set aside fields.
- vi. Constructing more small ponds would also increase the value of the site.

j. The Landscape Masterplan and the Proposed Conservation Zones

k. The Masterplan successfully accommodates the infrastructure of the Football Centre without significant loss of trees and with minimal intrusion into wood-pasture areas or other habitats of special concern. Inevitably there are some difficulties, particularly where roads and buildings are positioned close to wood-pasture trees - in the Ice House and Western Wood-Pastures, but the Plan retains all the Veteran and other ancient specimens.

l. Prospects and possibilities for Habitat Restoration and Creation

m. Extensive tree planting is envisaged in most compartments. This can be seen as the beginning of a re-vitalisation of the Parkland. The plan does not propose planting new trees in the most important wood-pasture areas, which is welcomed (c.f above recommendations)

n. Where planting is to take place, it is recommended that only native species, appropriate for the region, and of known provenance, should be used throughout, with the possible exception of some trees in the car parks and those

closely related to buildings where a more formal and "controlled" appearance may be preferred.

o. Intensive agricultural management of grassland has produced monotonous swards with minimal aesthetic appeal and ecological interest. The envisaged change of use provides an opportunity to reverse the trend towards uniformity and simplification within the Conservation Zones.

p. The main areas of open grassland will be in the eastern Conservation Zone – in the Lin Brook Pastures, Hall Field and the south-eastern part of Southern Grassland.

q. Diversification will involve curtailing fertiliser input and introducing some means of controlling grass growth, either cutting or grazing. The former is probably the most practical, the latter the more desirable, at least in the long term, but this introduces other complications (stock management, fencing etc).

r. Indications from the set-aside fields are that diversification of the grassland, without some active assistance, is likely to be a slow process. After ten years the set-aside fields do have more diverse swards, but only from an increase in weedy species. It is likely that ploughing and re-seeding with mixtures designed to produce low-maintenance, species - rich grassland will be necessary to achieve a desirable result.

s. The grassland in most of the wood-pasture is much the same as in the treeless areas, but diversification of these areas by similar means would be virtually impossible without risking damage to tree root systems. Other aspects of habitat creation in the conservation zones are likely to be on a comparatively small-scale.

t. Different mowing regimes will be adopted to preserve and maintain sensitive semi and unimproved grassland. This will be in accordance with the guidelines i.e. once/twice a year to encourage the establishment of wildflower species in the grass cover.

u. Arboricultural works generally to existing trees, woodland and plantations to include thinning out of unhealthy trees and rhododendron invasion etc.

v. The lakes and watercourses will be cleared and weirs repaired as required.

w. In the longer term Muntjac deer could be reintroduced into the outer pasture areas fenced off and away from the main development.

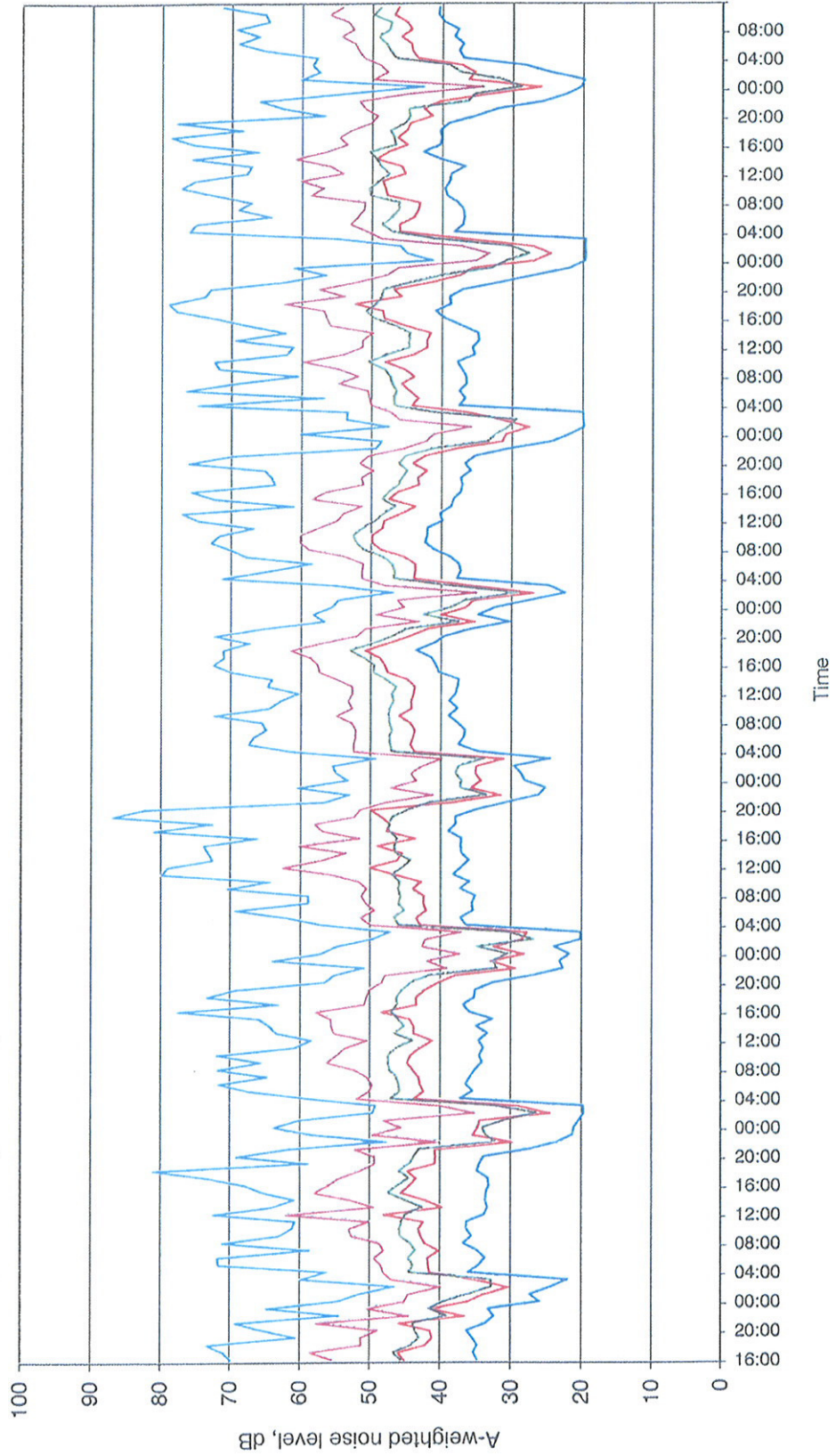
x. The remaining archaeological features identified in the site assessment table 4 of the archaeological report should be interpreted.

APPENDIX 1: ACCOUSTIC SURVEY

Proposed National Football Centre Site: Byrkley Park, Staffordshire

Environmental Noise Survey: 1 hr sampling periods at Position 1
16:00 hrs, Thu 24th May - 11:00 hrs, Fri 1st June 2001

— LAeq — LA 10 — LA 90 — LA 01 — LAMax



Position 2 Noise Levels (dB): 24th May 2001, 15 minute sampling periods.

Time	L _{Aeq}	L _{AMax}	L _{AMin}	L _{A1}	L _{A10}	L _{A90}
16:00	58.3	85.3	34.7	66.8	47.2	37.6
16:15	47.5	75.6	31.6	50.4	43.6	35.8
16:30	55.3	78.9	31.0	69.0	54.6	36.2
16:45	49.3	72.3	30.2	63.0	47.6	34.0
17:00	56.4	83.1	30.8	67.8	46.4	34.2
Avg	53.4	79.0	31.7	63.4	47.9	35.6

Position 3 Noise Levels (dB): 24th May 2001, 10 minute sampling periods.

Time	L _{Aeq}	L _{AMax}	L _{AMin}	L _{A1}	L _{A10}	L _{A90}
16:27	56.3	70.7	36.2	67.6	59.4	42.4
16:37	61.1	75.8	38.0	71.2	63.6	46.4
16:47	61.9	80.5	37.6	74.0	64.4	43.4
16:57	56.6	70.2	36.4	66.8	61.4	43.6
Avg	59.0	74.3	37.1	69.9	62.2	44.0

Position 3 Noise Levels (dB): 25th May 2001, 10 minute sampling periods.

Time	L _{Aeq}	L _{AMax}	L _{AMin}	L _{A1}	L _{A10}	L _{A90}
12:27	57.5	74.4	32.0	71.2	59.0	39.4
12:37	53.1	74.4	31.4	64.4	53.2	37.6
12:47	54.4	71.9	32.3	68.8	54.4	38.2
12:57	54.5	73.9	34.1	65.6	56.4	40.0
13:07	57.6	77.0	34.3	73.2	55.2	39.0
13:17	59.7	78.3	32.2	75.0	56.8	37.8
13:27	47.9	65.9	33.1	57.6	50.8	37.4
13:37	53.3	66.4	32.0	64.2	56.0	36.0
13:47	53.3	71.4	31.0	67.4	53.4	37.4
Avg	55.3	72.9	32.4	67.9	56.3	37.8

Position 4 Noise Levels (dB): 25th May 2001, 10 minute sampling periods.

Time	L _{Aeq}	L _{AMax}	L _{AMin}	L _{A1}	L _{A10}	L _{A90}
12:38	45.1	64.0	31.8	52.8	48.0	36.8
12:48	48.8	64.0	33.4	59.8	51.2	38.2
12:58	59.9	75.7	33.1	71.6	63.4	39.8
13:08	44.9	59.0	33.5	53.2	48.2	37.8
13:18	42.7	61.1	33.8	51.2	45.2	36.6
13:28	42.4	55.5	33.5	50.6	45.4	36.8
13:38	45.7	64.0	33.4	54.2	48.4	39.2
13:48	45.8	68.4	34.4	52.4	48.4	38.2
Avg	46.9	64.0	33.4	55.7	49.8	37.9

Site Plan & Measurement Positions



APPENDIX 2: TERRESTRIAL INVERTABRATES LIST

APPENDIX 4

INSECT SPECIES RECORDED ON 26TH MAY 2001

The following prefixes have been used to indicate status or habitat.

- * indicates species associated with dead wood.
- Nb Nationally Scarce species, listed in Appendix 3.
- L Local species, listed in Appendix 3

COLEOPTERA (Beetles)

ANOBIIDAE (Woodworm beetles)	
* <i>Grynobius planus</i>	Local; breeds in hard dead wood.
BYRRHIDAE (Pill beetles)	
<i>Cytilus sericeus</i>	Common.
BYTURIDAE (Raspberry beetles)	
<i>Byturus tomentosus</i>	Common, on <i>Rubus</i> .
CANTHARIDAE (Soldier beetles)	
<i>Cantharis decipiens</i>	Common.
<i>Cantharis nigra</i>	Common.
<i>Cantharis pellucida</i>	Common.
<i>Cantharis rustica</i>	Common.
<i>Rhagonycha limbata</i>	Common.
CARABIDAE (Ground beetles)	
<i>Agonum muelleri</i>	Common.
L <i>Amara tibialis</i>	Local.
<i>Dromius linearis</i>	Common.
CERAMBYCIDAE (Longhorn beetles)	
<i>Grammoptera ruficornis</i>	Common, on flowers. Breeds in dead twigs.
CHRYSOMELIDAE (Leaf beetles)	
<i>Epitrix pubescens</i>	Local, on Woody Nightshade <i>Solanum dulcamara</i> .
<i>Gastrophysa viridula</i>	Local, on <i>Rumex</i> and <i>Polygonum</i> species.
<i>Lochmaea crataegi</i>	Common, on hawthorn <i>Crataegus</i> species.
<i>Phaedon tumidulus</i>	Common, on Umbelliferae.
COCCINELLIDAE (Ladybirds)	
<i>Adalia bipunctata</i>	Common.
<i>Adalia decempunctata</i>	Common.
<i>Exochomus quadripustulatus</i>	Common, often on pine or Broom.
<i>Scymnus haemorrhoidalis</i>	Common, in grassland habitats.
CURCULIONIDAE (Weevils)	
<i>Curculio glandium</i>	Common, on oak <i>Quercus</i> species.
<i>Nedyus quadrimaculatus</i>	Common, on Stinging Nettle <i>Urtica dioica</i> .
<i>Phyllobius pyri</i>	Common, on a variety of tree species.

<i>obius roboretanus</i>	Common, on a variety of plants.
<i>irusus cervinus</i>	Common, on a variety of tree species.
<i>ncus pericarpus</i>	Common, on dock <i>Rumex</i> species.
<i>chaenus quercus</i>	Common, on oak <i>Quercus</i> species.
ERIDAE (Click beetles)	
<i>tes acuminatus</i>	Common, larvae develop on plant roots.
<i>tes obscurus</i>	Common, larvae develop on plant roots.
<i>tes pallidulus</i>	Common, larvae develop on plant roots.
<i>edus balteatus</i>	Common, larvae develop in dead wood.
<i>s haemorrhoidalis</i>	Common.
<i>cera cuprea</i>	Local, a northern species in Britain.
<i>ollis linearis</i>	Common, larvae develop in dead wood.
<i>ea minuta</i>	Local, often on flowers.
CIDIIDAE (Fungus beetles)	
<i>s bifasciatus</i>	Common.
CYRIDAE	
<i>ius bipustulatus</i>	Common, on flowers.
DULIDAE (Pollen beetles, etc)	
<i>ea aestiva</i>	Common, on flowers.
<i>thes aeneus</i>	Common, on flowers.
EMERIDAE	
<i>nera cyanea</i>	Nationally Scarce Category B (Nb)
LACRIDAE	
<i>s testaceus</i>	Common.
YTIDAE (Bark beetles)	
<i>us intricatus</i>	Local, larvae develop in galleries under
PTIIDAE	
<i>s garneysi</i>	Local, adults frequent flowers.
<i>is humeralis</i>	Common, adults frequent flowers.
<i>is maculata</i>	Common, adults frequent flowers.
<i>s regimbarti</i>	Common, adults frequent flowers.
HYLINIDAE (Rove beetles)	
<i>orus hypnorum</i>	Common.
<i>porus obtusus</i>	Common.
CAPTERA (Earwigs)	
CULIDAE	
<i>la auricularia</i> (Common Earwig)	Common.
ERA (Flies)	
NIDAE (St Mark's Flies)	
<i>arci</i>	Common.
IDAE (Dance flies)	
<i>tessellata</i>	Common.
IIDAE (Hover-flies)	
<i>ona lucorum</i>	Common.

Myathropa florea
holes, etc.

Common, larvae develop wet in tree rot-

HEMIPTERA-HETEROPTERA (Bugs)

LYGAEIDAE (Ground bugs)

Peritrechus geniculatus

Common, in grassland habitats.

MIRIDAE (Capsid bugs)

Harpocera thoracica

Common, on oak

Stenodema laevigatum

Common, on grasses

LEPIDOPTERA (Butterflies)

LYCAENIDAE

Lycaena phlaeas (Small Copper)

Common, larva on *Rumex* species.

NYMPHALIDAE

Aglais urticae (Small Tortoiseshell)
dioica.

Common, larva on Stinging Nettle *Urtica*

PIERIDAE

Anthocharis cardamines (Orange-tip)
Cruciferae.

Common, larva on several species of

Pieris napi (Green-veined White)

Common, larva on Cruciferae.

LEPIDOPTERA (Moths)

LYMANTRIIDAE

Euproctis similis (Yellow-tail)
shrubs.

Common, larva on a variety of trees and