



Broomfield House

Transport Impact Statement



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1 Introduction

1.1 General

- 1.1.1 Broomfield House is an historic building within Broomfield Park that has been derelict for several years. London Borough of Enfield (LBE) has sought, with community support, to bring forward proposals to restore the main house and its surroundings. In recent years proposals to restore the house and its surroundings for commercial use have received planning consent, despite objections from local residents on traffic and parking grounds.
- 1.1.2 LBE has set up the Broomfield House Task Force (BHTF) to secure the future of Broomfield House. Members of the BHTF include the Leader of the Council, the local Member of Parliament (MP), Ward Members and representatives from the local community.
- 1.1.3 The purpose of the BHTF is to oversee the restoration of Broomfield House and the stable block, located to the south of the main building, and to promote a sympathetic development fully integrated into both the immediate environment and local community. It is recognised that an intensification of uses on the site will generate additional access requirements, and the BHTF wishes to see these access needs fully met.
- 1.1.4 Outline BHTF proposals for the site comprise mixed community and leisure uses and include the reconstruction and refurbishment of the main house and stable block and restoration of the surrounding historic park. The restoration project is expected to be self-financing and is to include a Lottery Fund bid. The BHTF wishes to be appraised of any traffic-related impacts or issues arising from the development proposals and to ensure that adequate access and parking is safeguarded.
- 1.1.5 The site (numbered AO) is shown in the Council's Unitary Development Plan (UDP) as an "area of opportunity" and is identified as suitable for community use. In accordance with strategic national and regional planning guidance on sustainable development, the restoration of Broomfield House will need to be consistent with wider sustainability objectives. As such, LBE considers that a traffic/transport solution to minimise the site's dependency on car use is essential.

1.2 Scope of Work

- 1.2.1 JMP Consultants Ltd. has been commissioned by the London Borough of Enfield to prepare a TIS which assesses access, parking and servicing requirements of the development proposals for the site.

- 1.2.2 The objective of the TIS is to provide a thorough and objective assessment of the Broomfield House proposals and to indicate any design measures essential to safe and effective access by all modes of travel. The statement considers all movements associated with the proposed development and describes how these may be accommodated in accordance with the Borough's policies and standards.
- 1.2.3 The overall approach is based on the premise that any new development, such as the Broomfield House proposals, should be readily accessible by all modes of transport, with the emphasis being given to non-car modes. Sustainable development is only realistically achievable if alternatives to private car use are integral to the design from the outset. The scope of this TIS includes the following:
- An access strategy that encompasses all modes of travel and seeks to raise travel awareness;
 - Proposals for safe and convenient access to the development so that it can be readily accessed and serviced; and,
 - Recommendations for a preferred site access and parking strategy.
- 1.2.4 JMP has discussed and agreed the scope of the TIS with Borough Officers. The TIS has been prepared in accordance with both the London Borough of Enfield's guidelines and requirements given by the Institution of Highways and Transportation (IHT) Traffic Impact Assessment (TIA) guidelines (1994).
- 1.2.5 A site meeting also took place on 21 September 2000 and was attended by representatives from LBE, JMP and the Broomfield House Trust (BHT). The BHT is a charitable trust which has a particular local interest with respect to Broomfield House and its environs. The site meeting provided the opportunity for BHT members to identify concerns and discuss possible solutions.
- 1.2.6 Technical appendices (A to G) located at the end of this report contain detailed background information used in the assessment and summarised in the report.

1.3 Planning Policy Context

- 1.3.1 This section examines in detail the planning policy context of the Broomfield House development proposals, particularly in relation to the encouragement of more sustainable transport modes.

PPG13

- 1.3.2 The consultation draft of PPG13: Transport (October 1999) regards land use planning as a key element of effective transport policies, specifically in relation to delivering the Government's integrated transport strategy. PPG13 notes that by

'influencing the location, scale, density, design and mix of land uses, planning can help reduce the need for travel, reduce the length of journeys and make it safer and easier for people to walk, cycle or use public transport'. Two core objectives central to PPG13 are to promote more sustainable transport choices, and to reduce the need to travel, especially by car.

RPG9: Draft Regional Planning Guidance for the South East

- 1.3.3 RPG9 notes that a particular objective in meeting London's potential to accommodate growth will be to seek balanced and mixed development consistent with the objectives of urban renaissance and maintaining high levels of environmental quality (4.7). With respect to form and design of urban development, RPG9 states:

POLICY Q2 The quality of life in urban areas, including suburban areas, should be raised through significant improvement to the urban environment, making urban areas more attractive places in which to live, work, shop, spend leisure time and invest, thus helping to counter trends to more dispersed patterns of residence and travel.

- 1.3.4 The Regional Transport Strategy (RTS) is presented in Chapter 9 of RPG9. The guidance recognises that the promotion of urban renaissance, regeneration and more concentrated forms of development have significant transport implications (9.1). RPG9 states:

POLICY T1 Policies should be developed which minimise the need to travel whilst enhancing choice and ease of access to activities, taking into account the needs of all users including disabled people and other people with reduced mobility.

...development should be planned holistically to minimise the need for movement and to facilitate and encourage safe movement on foot, by cycle and public transport.

- 1.3.5 RPG9 places particular emphasis on the usefulness of travel awareness campaigns and Travel Plans to achieve sustainable transport objectives, as detailed in Policy T2. RPG9 states that Travel Plans should seek to encourage reductions in journeys by car, reductions in the level of car parking provided, increased use of alternative transport modes, reduced traffic speeds and improved safety, particularly for pedestrians and cyclists (9.9). Equally, RPG9 places significant emphasis on the contribution of both walking and cycling, stating that:

POLICY T4 Walking and cycling should be vigorously promoted especially for shorter distances, as the most environmentally-friendly ways to travel.

- 1.3.6 Specifically, RPG9 requires new development to make, 'adequate provision for pedestrians and cyclists, including measures to link development with existing footpaths and cycle networks' (9.20).

RPG3: Strategic Planning Guidance London Planning Authorities

- 1.3.7 Strategic Guidance for London Planning Authorities, RPG3 (1996), seeks to encourage a pattern of land use and transport provision which minimises harm to the environment and reduces the need to travel, especially by car, consistent with the needs of sustainable development. In addition, it seeks to facilitate the development of transport systems which are safe and efficient, and which contribute to the competitiveness, regeneration and environmental quality.

Unitary Development Plan

- 1.3.8 The London Borough of Enfield's transportation policies are given in Chapter 12 of its Adopted Unitary Development Plan (UDP) (March 1994) and subsequent Interim Amendments (June 1997 and January 1999). LBE pursue and support transport and planning policies which reduce the need to travel; reduce the length of those journeys which need to be made; encourage the use of modes other than the car and improve facilities for pedestrians and cyclists.

- 1.3.9 Relevant Part I Policies in the Enfield UDP (1994) include:

POLICY (I) GD1: TO ENSURE THAT ALL NEW DEVELOPMENTS HAVE APPROPRIATE REGARD TO THEIR SURROUNDINGS AND THAT THEY ARE SATISFACTORILY INTEGRATED INTO THE LOCAL COMMUNITY.

POLICY (I) T3: TO IMPROVE ACCESSIBILITY TO DESIRED DESTINATIONS BY APPROPRIATE LAND USE POLICIES, SO AS TO REDUCE DEPENDENCE ON TRANSPORT (PARTICULARLY PRIVATE TRANSPORT), RATHER THAN MERELY PROVIDING FOR ADDITIONAL MOBILITY.

POLICY (I) T7: TO IMPROVE FACILITIES AND CONDITIONS FOR PEDESTRIANS AND CYCLISTS.

POLICY (I) T10: TO PROMOTE THE PROVISION AND USE OF PARKING FACILITIES SO AS TO MEET ESSENTIAL NEEDS OF LOCAL RESIDENTS, BUSINESSES AND VISITORS TO THE BOROUGH.

POLICY (I) T11: TO PROMOTE THE IMPROVEMENT OF SAFETY AND SECURITY ON ALL PARTS OF THE TRANSPORT SYSTEM.

1.3.10 Relevant Part II Policies in the LBE's UDP (1994) with respect to general development considerations include:

POLICY (II) GD6: TO HAVE REGARD, WHEN ASSESSING PROPOSALS FOR DEVELOPMENT, TO THE TRAFFIC LIKELY TO BE GENERATED BY THAT DEVELOPMENT AND ITS IMPLICATIONS IN TERMS OF:

- (a) The level of public transport provision and its effects on services;
- (b) The capacity of the highway network and junctions in the vicinity;
- (c) The parking provision on-site and the safety of any on-street parking likely to be generated;
- (d) The effects on environmental conditions.

POLICY (II) GD7: TO ENSURE THAT ALL DEVELOPMENT NORMALLY COMPLIES WITH THE COUNCIL'S PARKING STANDARDS (APPENDIX A1.4).

POLICY (II) GD8: TO REQUIRE THAT THE SITE ACCESS AND SERVICING OF ALL DEVELOPMENT NORMALLY COMPLIES WITH THE COUNCIL'S STANDARDS (APPENDIX A1.5) AND IN PARTICULAR:

- (a) That access, servicing and turning facilities are provided within the curtilage of the development site;
- (c) That refuse storage facilities are carefully sited and screened in all cases and not more than 25 metres from the access road...;
- (d) That in all non-residential development, there are adequate arrangements for circulation, servicing and off-street parking with access to such developments normally via non-residential streets.

1.3.11 Relevant Part II Policies in the LBE's UDP (1994) regarding land use, transportation and environmental considerations include:

POLICY (II) T1: TO SEEK TO ENSURE THAT DEVELOPMENT TAKES PLACE IN LOCATIONS WHICH HAVE APPROPRIATE LEVELS OF

ACCESSIBILITY TO THE TRANSPORT NETWORK,
PARTICULARLY THE PUBLIC TRANSPORT NETWORK.

POLICY (II) T10: TO OBTAIN ENVIRONMENTAL IMPROVEMENTS IN APPROPRIATE AREAS THROUGH THE USE OF TRAFFIC CALMING AND OTHER TRAFFIC MANAGEMENT TECHNIQUES.

1.3.12 Relevant Part II Policies in the LBE's UDP (1994) in relation to highway improvements includes:

POLICY (II) T13: TO ASSESS PROPOSALS FOR THE CREATION OR IMPROVEMENT OF AN ACCESS ONTO THE PUBLIC HIGHWAY IN RELATION TO NEW DEVELOPMENTS, IN ACCORDANCE WITH THE FOLLOWING CRITERIA:

- (a) The capacity of the existing highway network in relation to the current and projected traffic flows;
- (b) The environmental impact, especially in residential areas;
- (c) The amount of on-site car parking provision proposed;
- (d) The arrangements for delivery vehicles to service the development clear of the public highway;
- (e) The layout of new roads in regard to safety, visibility, kerb radii and provision for pedestrians and cyclists.

1.3.13 Relevant Part II Policies in the LBE's UDP (1994) regarding the needs of pedestrians and cyclists include:

POLICY (II) T16: TO REQUIRE ADEQUATE ACCESS FOR PEDESTRIANS AND PEOPLE WITH DISABILITIES IN ALL NEW DEVELOPMENTS.

POLICY (II) T19: TO GIVE GREATER PRIORITY TO THE NEEDS AND SAFETY OF CYCLISTS BY:

- (b) Requiring cycle facilities to be incorporated into major new developments, where appropriate.

POLICY (II) T21: TO SEEK THE PROVISION OF CYCLE PARKING FACILITIES AT ALL APPROPRIATE LOCATIONS IN THE BOROUGH.

1.3.14 Relevant Part II Policies in the LBE's UDP (1994) in relation to parking include:

POLICY (II) T32: TO ENSURE THAT CAR PARKING FACILITIES TAKE INTO ACCOUNT THE NEEDS OF PEOPLE WITH DISABILITIES.

Interim Transport Plan 2001/2002

1.3.15 The Interim Transport Plan (ITP) 2001/2002 presents the Council's plan for transport in the Borough. Many of the ITP's Objectives and Strategies are common to 1994 UDP policies detailed above, however this year's ITP reflects subsequent national and regional planning policy guidance.

1.3.16 Relevant ITP Strategies in relation to parking include:

STRATEGY PP5: LIMIT TRAFFIC GENERATION FROM NEW DEVELOPMENTS BY MEANS OF MAXIMUM PARKING STANDARDS LINKED TO MEASURES OF PUBLIC TRANSPORT ACCESSIBILITY.

STRATEGY PP11: ALLOCATE PARKING SPACE FOR SPECIFIC USERS ACCORDING TO EXPLICIT PRIORITIES AND CRITERIA.

STRATEGY PP15: PROVIDE FOR THE NEEDS OF PEOPLE WITH A DISABILITY.

STRATEGY PP17: PROVIDE SAFE AND SECURE CYCLE PARKING IN ALL NEW DEVELOPMENTS... .

1.3.17 Relevant ITP Strategies in relation to travel awareness include:

STRATEGY TA2: TO ENCOURAGE, AND TAKE A LEAD ON, THE FORMULATION OF GREEN TRANSPORT PLANS FOR ORGANISATIONS AND BUSINESSES... .

STRATEGY TA3: TO REDUCE CAR DEPENDENCY BY PROGRESSING SCHEMES IN PARTNERSHIP WITH OTHERS WHICH AIM TO REDUCE THE NEED FOR TRAVEL AND PROMOTE THE USE OF ALTERNATIVE MODES OF TRAVEL WHILST TAKING INTO ACCOUNT THE NEEDS OF THOSE FOR WHOM THE CAR IS ESSENTIAL.

Parking Standards

1.3.18 LBE is currently in the process of reviewing its parking standards for the Borough. Revised car and cycle parking standards for new development are set out in the Council's UDP Interim Amendments (January 1999). Summaries of relevant standards are shown in Tables 1.1 and 1.2 respectively.

1.3.19 Parking standards for D1 Use Class (non-residential institutions) are provided, including standards for public or exhibition halls. However, these standards are not strictly representative of the type of community uses proposed for Broomfield House. In this instance it may be appropriate to consider the proposed community use on its individual merits, in accordance with Appendix A1.4 (1.7) of the UDP.

1.3.20 Appendix 1 of the Interim Amendments state that cycle parking for employees should be provided under cover and must be secure. Equally, visitor cycle parking should be located close to building entrances and covered, wherever possible. It is stated that, normally, visitor parking should be provided in the form of “Sheffield” type stands, although other equivalent or better types of cycle parking would be acceptable.

Table 1.1 Car Parking Standards Summary

Land Use	Sub Category	Car Parking Standard
A3: Sale of Food & Drink	Town Centre	1 space per 15m ² of public area
	Out of Centre	1 space per 5m ² public area. Minimum 1 space.
D1: Non-residential Institutions	Day Centre	1 space per 2 staff.
D1: Non-residential Institutions	Museum	1 space per 2 staff plus 1 space per 30m ² of display area.
D1: Non-residential Institutions	Public or Exhibition Halls	1 space per 3 staff plus 1 space per 9m ² of seating area.
D1: Non-residential Institutions	Other	Where no standard has been adopted for a particular type of development, appropriate parking provision may nevertheless be required. Each such case will be considered on its merits.

Table 1.2 Cycle Parking Standards Summary

Land Use	Sub Category	Cycle Parking Standard
A3: Sale of Food & Drink	Town Centre	1 space per 70m ² of GFA. Minimum of 1 space.
	Out of Centre	1 space per 70m ² GFA. Minimum of 1 space.
D1: Non-residential Institutions	Day Centre	1 space per 4 staff.
D1: Non-residential Institutions	Museum	1 space per 4 staff plus 1 space per 300m ² of display area.
D1: Non-residential	Public or	1 space per 250m ² .

Institutions

Exhibition Halls

2 Baseline Conditions

2.1 Site Location

- 2.1.1 The development site is set in the grounds of Broomfield Park, located south-east of Palmers Green Designated Town Centre in the south-west corner of the London Borough of Enfield, North London. Broomfield Park is bordered by Aldermans Hill (the A1004) to the north, Green Lanes (the A105) to the east, Broomfield Lane/Powys Lane to the south and Powys Lane (the B1452) to the west. The locality is characterised by suburban residential development. A Location Plan is provided at Figure 2.1.
- 2.1.2 As a Sixteenth Century Jacobean building set in period parks and gardens, Broomfield House was probably the oldest surviving building in Palmers Green. Its historic importance is reflected in its Grade II* Listed status. However Broomfield House is presently in a derelict state following a series of fires in the 1980's and 1990's which destroyed much of the main building. The site is surrounded by an historic wall which still stands and is a designated a listed structure.
- 2.1.3 Broomfield House is bounded directly to the north and east by gardens and to the west by a series of lakes. A sports ground and children's playground are located further to the east. The main house is bordered to the south by a number of buildings, including the park maintenance depot, the stable block and a terrace of four residential properties which are presently owned by the Council.
- 2.1.4 Existing vehicular access to the site is from Broomfield Lane, a Local Access Road, which runs east/west to the south of the site. The existing access/egress point is marked by an historic archway situated within the historic wall. Access to the site is currently restricted to authorised vehicles only, i.e. vehicles from the park maintenance depot and the four residential properties.
- 2.1.5 Traffic conditions in the vicinity of the site access have been established, including traffic flows, public transport routes and personal injury accidents. This information provides a baseline against which the proposals are assessed.

2.2 Local Highway Network

- 2.2.1 Broomfield Park is bordered by Green Lanes (the A105) to the east, which is designated a Principal Road in the Council's road hierarchy (Figure 3, ITP 2000/2001) and a principal north/south route in the area. The park is bordered by Aldermans Hill (the A1004) to the north and Powys Lane (the B1452) to the west and south-west. Both these roads are designated Local Distributor Roads. The local highway network is illustrated in Figure 2.2.

- 2.2.2 Powys Lane gives access to the North Circular Road (the A406) to the south. The A406 is designated part of the Greater London Road Network and forms the principal east/west route in the south of the Borough. Powys Lane is traffic calmed with speed tables between Broomfield Lane to the north and the A406 to the south.
- 2.2.3 Broomfield Avenue runs north/south along the eastern edge of Broomfield Park and is a Local Access Road. The northern end of Broomfield Avenue is closed, preventing direct access to Aldermans Hill (the A1004). The road was closed temporarily in February 1996 to control north to south rat-running to Green Lanes (the A105) and Bounds Green (the A109). This temporary road closure was made permanent on 6 February 1997.
- 2.2.4 JMP has undertaken a site inventory on Broomfield Lane from west of Belmont Avenue to west of Elmwood Avenue, focussing on the existing access via the historic archway. The inventory recorded in detail information regarding the positions of road markings (e.g. hatched areas and yellow lines); pedestrian facilities (e.g. dropped kerbs and refuges); access crossovers for individual properties (i.e. drive entrances) and locations of lamp columns, signage and trees. Road widths were also recorded at regular intervals in addition to access dimensions at the archway. Inventory information for Broomfield Lane is shown in Figure 2.3 and more detailed information for the archway access is shown at Figure 2.4.

2.3 Traffic Movements

- 2.3.1 JMP has collated existing traffic data held by LBE to assess traffic volumes and speeds on the local highway network.
- 2.3.2 Traffic count data, dated 1997, has been obtained from LBE for three locations on Broomfield Lane for the AM (08.00 to 09.00), Inter (13.00 to 14.00) and PM (17.00 to 18.00) Peaks for a weekday, Saturday and Sunday. These three locations are: north of Elmwood Avenue, east of Belmont Avenue and west of Belmont Avenue. Traffic count data for Broomfield Lane is summarised in Table 2.1. Peak traffic flow data for Broomfield Lane is also shown in Figure 2.5. Full traffic count survey results are included at Appendix A.
- 2.3.3 The 1997 traffic count data indicates relatively high peak hour two-way traffic flows on Broomfield Lane given its Local Access Road status. Weekday two-way traffic flows on Broomfield Lane north of Elmwood Avenue are 467, 387 and 578 vehicles/hour for the AM, Inter and PM Peaks respectively. Weekend traffic has a different flow profile on Broomfield Lane. Saturday two-way traffic flows on Broomfield Lane north of Elmwood Avenue are 207, 479 and 518 vehicles/hour for the AM, Inter and PM Peak periods respectively.

- 2.3.4 Traffic speed data for 1997 has also been provided by LBE for two locations on Broomfield Lane north of Elmwood Avenue and east of Belmont Avenue. Vehicle speeds for weekday AM (08.00 to 09.00), Inter (13.00 to 14.00) and PM (17.00 to 18.00) Peaks are summarised in Table 2.2. Speed survey results are included in full at Appendix B. Broomfield Lane peak hour traffic speed survey results are shown in Figure 2.6.
- 2.3.5 Survey results show that there is not a significant difference between peak and off-peak vehicle speeds at both survey points on Broomfield Lane. Table 2.2 indicates slightly higher vehicle speeds east of Belmont Avenue than north of Elmwood Drive. Survey results show that the % of vehicles exceeding 35 mph is relatively low, with an average of 6.4% and 0.4% of vehicles at Belmont Avenue and Elmwood Drive survey locations respectively.
- 2.3.6 Daily average and 85th percentile (i.e. the highest 15%) vehicle speeds at both survey points Broomfield Lane have been calculated from speed survey results included at Appendix B. The average and 85th percentile speeds north of Elmwood Drive are 24.3 mph and 25 to 30 mph respectively. The average and 85th percentile speeds east of Belmont Avenue are 27.3 mph and 30 to 35 mph respectively.
- 2.3.7 The number and % of HGV's on Broomfield Lane, immediately west of Green Lanes, for three peak hourly periods is shown in Table 2.3. This shows that HGV's comprise less than approximately 2% of total traffic flow for both AM (08.00 to 09.00) and Inter (11.00 to 12.00) Peak periods. HGV composition is even less during the PM (17.00 to 18.00) Peak, i.e. under 0.5%.
- 2.3.8 Further traffic counts for the Green Lanes/Broomfield Lane/Oakthorpe Road; Aldermans Hill/Green Lanes and Aldermans Hill/Cannon Hill/Powys Lane/Forestdale junctions by vehicle type and time period are summarised in Tables 2.4 to 2.12. Traffic counts are also shown in Figures 2.7 to 2.9. Full traffic count data is included at Appendix A.

Table 2.1 Broomfield Lane Peak Traffic Flow Summary

Location	Peak	Time Period	Number of Vehicles ⁽¹⁾		
			Mon. to Fri.	Saturday	Sunday
Broomfield Lane (North of Elmwood Ave.)	AM	08.00 to 09.00	467	207	73
	Inter	13.00 to 14.00	387	479	439
	PM	17.00 to 18.00	578	518	286
Broomfield Lane (East of Belmont Avenue)	AM	08.00 to 09.00	485	220	77
	Inter	13.00 to 14.00	396	497	436
	PM	17.00 to 18.00	575	522	286
Broomfield Lane (West of Belmont Avenue)	AM	08.00 to 09.00	475	215	-
	Inter	13.00 to 14.00	394	246	-
	PM	17.00 to 18.00	581	533	-

(Source: LBE. 18/09/97)

Note

(1) Average number of vehicles given for Monday to Friday.

Table 2.2 Broomfield Lane Peak Hour Traffic Speed Summary

Location	Time Period	Vehicle Speed (% Vehicles/Miles Per Hour)							Total
		<15	15-20	20-25	25-30	30-35	35-40	>40	
Broomfield Lane (N. Elmwood Ave.)	0800-0900	0.4	1.9	43.6	48.2	5.5	0.2	0.2	100
	1300-1400	3.3	7.4	42.8	40.8	5.2	0.8	0.0	100
	1700-1800	2.8	12.9	53.6	28.5	2.0	0.0	0.2	100
	% Average	2.2	7.4	46.7	39.1	4.2	0.3	0.1	100
Broomfield Lane (E. Belmont Ave.)	0800-0900	0.9	4.3	15.2	40.6	28.8	7.7	2.5	100
	1300-1400	2.9	6.5	27.2	38.5	21.4	2.7	0.8	100
	1700-1800	3.3	8.4	25.7	40.2	16.9	4.3	1.2	100
	% Average	2.4	6.4	22.7	39.8	22.3	4.9	1.5	100

(Source: LBE. 18/09/97)

Table 2.3 Broomfield Lane (West of Green Lanes) % HGV Summary

Peak	Time Period	Total Flow	No. HGV's	% HGV's
AM Peak	08.00 to 09.00	15	685	2.19
Inter Peak	11.00 to 12.00	12	587	2.04
PM Peak	17.00 to 18.00	4	831	0.48

(Source: LBE Tuesday 17/09/96)

Table 2.4 Green Lanes/Broomfield Lane Junction AM Peak (08.00 to 09.00) Traffic Flow

Link	Direction	Traffic Flow by Vehicle Type ⁽¹⁾						
		Car	MGV	HGV	Bu s	M/C	Total ⁽²⁾	P/C
Green Lanes (N)	Northbound	661	24	6	30	7	728	11
	Southbound	573	12	10	19	29	643	25
	Two-way	1234	36	16	49	36	1371	36
Green Lanes (S)	Northbound	620	22	8	30	7	687	11
	Southbound	561	14	8	19	30	632	30
	Two-way	1181	36	16	49	37	1319	41
Broomfield Lane	Eastbound	350	9	6	2	2	369	4
	Westbound	296	4	9	3	4	316	2
	Two-way	646	13	15	5	6	685	6
Oakthorpe Road	Eastbound	261	3	1	0	0	265	1
	Westbound	236	2	0	1	3	242	4
	Two-way	497	5	1	1	3	507	5

(Source: LBE. 17/09/96)

Notes

(1) Car: Car/Taxi+LGV (Light Goods Vehicle); MGV: (Medium Goods Vehicle) <7.5 T; HGV: (Heavy Goods Vehicle); M/C: (Motorcycle); and P/C: (Pedal Cycle).

(2) Total Excluding Pedal Cycles.

Table 2.5 Green Lanes/Broomfield Lane Junction Inter Peak (11.00 to 12.00) Traffic Flow

Link	Direction	Traffic Flow by Vehicle Type						
		Car	MGV	HGV	Bu s	M/C	Total ⁽¹⁾	P/C
Green Lanes (N)	Northbound	598	18	11	20	7	654	5
	Southbound	657	25	9	21	6	718	11
	Two-way	1255	43	20	41	13	1372	16
Green Lanes (S)	Northbound	559	16	12	19	7	613	4
	Southbound	659	23	11	21	7	721	9
	Two-way	1218	39	23	40	14	1334	13
Broomfield Lane	Eastbound	307	8	3	0	2	320	1
	Westbound	261	4	1	0	1	267	2
	Two-way	568	12	4	0	3	587	3
Oakthorpe Road	Eastbound	135	6	1	0	1	143	1
	Westbound	130	2	0	1	1	134	1
	Two-way	265	8	1	1	2	277	2

((Source: LBE. 17/09/96)

Note

- (1)) Total Excluding Pedal Cycles.

Table 2.6 Green Lanes/Broomfield Lane Junction PM Peak (17.00 to 18.00) Traffic Flow

Link	Direction	Traffic Flow by Vehicle Type ⁽¹⁾						Total ⁽²⁾	P/C
		Car	MGV	HGV	Bu s	M/C			
Green Lanes (N)	Northbound	999	20	8	21	20	1068	19	
	Southbound	812	7	2	17	13	851	11	
	Two-way	1811	27	10	38	33	1919	30	
Green Lanes (S)	Northbound	892	17	7	21	20	957	19	
	Southbound	746	9	3	17	14	789	12	
	Two-way	1638	26	10	38	34	1746	31	
Broomfield Lane	Eastbound	484	5	3	0	8	500	3	
	Westbound	322	3	1	0	5	331	0	
	Two-way	806	8	4	0	13	831	3	
Oakthorpe Road	Eastbound	271	0	0	0	3	274	2	
	Westbound	150	3	0	0	1	154	0	
	Two-way	421	3	0	0	4	428	2	

(Source: LBE. 17/09/96)

Notes

(2) Car: Car/Taxi+LGV (Light Goods Vehicle); MGV: (Medium Goods Vehicle) <7.5 T; HGV: (Heavy Goods Vehicle); M/C: (Motorcycle); and P/C: (Pedal Cycle).

(2) Total Excluding Pedal Cycles.

Table 2.7 Aldermans Hill/Green Lanes Junction AM Peak (08.00 to 09.00) Traffic Flow

Link	Direction	Traffic Flow by Vehicle Type ⁽¹⁾						
		Car	MGV	HGV	Bu s	M/C	Total ⁽²⁾	P/C
Aldermans Hill	Eastbound	407	18	7	10	6	448	7
	Westbound	302	9	3	15	4	333	3
	Two-way	709	27	10	25	10	781	10
Green Lanes (N)	Northbound	655	30	17	18	5	725	7
	Southbound	352	13	10	16	7	398	14
	Two-way	1007	43	27	34	12	1123	21
Green Lanes (S)	Northbound	682	27	12	26	9	756	8
	Southbound	484	19	9	19	13	544	19
	Two-way	1166	46	21	45	22	1300	27

(Source: LBE. 24/09/96)

Notes

(1) Car: Car/Taxi+LGV (Light Goods Vehicle); MGV: (Medium Goods Vehicle) <7.5 T; HGV: (Heavy Goods Vehicle); M/C: (Motorcycle); and P/C: (Pedal Cycle).

(2) Total Excluding Pedal Cycles.

Table 2.8 Aldermans Hill/Green Lanes Junction Inter Peak (11.00 to 12.00) Traffic Flow

Link	Direction	Traffic Flow by Vehicle Type						
		Car	MGV	HGV	Bu s	M/C	Total ⁽¹⁾	P/C
Aldermans Hill	Eastbound	277	10	4	7	5	303	3
	Westbound	247	23	12	10	3	295	4
	Two-way	524	33	16	17	8	598	7
Green Lanes (N)	Northbound	601	40	15	17	4	677	5
	Southbound	588	29	15	17	10	659	5
	Two-way	1189	69	30	34	14	1336	10
Green Lanes (S)	Northbound	674	34	11	17	5	741	3
	Southbound	631	36	19	20	9	715	4
	Two-way	1305	70	30	37	14	1456	7

(Source: LBE. 24/09/96)

Note

(1) Total Excluding Pedal Cycles.

Table 2.9 Aldermans Hill/Green Lanes Junction PM Peak (17.00 to 18.00) Traffic Flow

Link	Direction	Traffic Flow by Vehicle Type ⁽¹⁾						Total ⁽²⁾	P/C
		Car	MGV	HGV	Bu s	M/C			
Aldermans Hill	Eastbound	366	18	4	11	4	403	10	
	Westbound	487	9	0	12	10	518	0	
	Two-way	853	27	4	23	14	921	10	
Green Lanes (N)	Northbound	872	26	3	18	23	942	16	
	Southbound	699	12	0	20	5	736	1	
	Two-way	1571	38	3	38	28	1678	17	
Green Lanes (S)	Northbound	997	24	0	19	31	1071	12	
	Southbound	703	19	1	20	7	750	7	
	Two-way	1700	43	1	39	38	1821	19	

(Source: LBE. 24/09/96)

Notes

(1) Car: Car/Taxi+LGV (Light Goods Vehicle); MGV: (Medium Goods Vehicle) <7.5 T; HGV: (Heavy Goods Vehicle); M/C: (Motorcycle); and P/C: (Pedal Cycle).

(2) Total Excluding Pedal Cycles.

Table 2.10 Aldermans Hill/Cannon Hill/Powys Lane Junction AM Peak (08.00 to 09.00)
Traffic Flow

Link	Direction	Vehicle Type ⁽¹⁾					Total ⁽²⁾	P/C
		Car	MGV	HGV	Bu s	M/C		
Aldermans Hill	Eastbound	453	10	3	16	6	488	3
	Westbound	810	12	6	18	6	852	4
	Two-way	1263	22	9	34	12	1340	7
Cannon Hill	Northbound	599	17	8	22	5	651	2
	Southbound	635	7	5	14	15	676	5
	Two-way	1234	24	13	36	20	1327	7
Powys Lane	Northbound	677	17	8	7	7	716	1
	Southbound	655	7	7	3	17	689	3
	Two-way	1332	24	15	10	24	1405	4
Forestdale	Eastbound	129	3	1	2	0	135	0
	Westbound	544	5	2	0	0	551	2
	Two-way	673	8	3	2	0	686	2

(Source: LBE. 15/10/97)

Notes

- (1) Car: Car/Taxi+LGV (Light Goods Vehicle); MGV: (Medium Goods Vehicle) <7.5 T; HGV: (Heavy Goods Vehicle); M/C: (Motorcycle); and P/C: (Pedal Cycle).
- (2) Total Excluding Pedal Cycles.

Table 2.11 Aldermans Hill/Cannon Hill/Powys Lane Junction Inter Peak (11.00 to 12.00)
Traffic Flow

Link	Direction	Vehicle Type					Total ⁽¹⁾	P/C
		Car	MGV	HGV	Bu s	M/C		
Aldermans Hill	Eastbound	363	12	9	13	1	398	0
	Westbound	359	16	4	23	2	404	1
	Two-way	722	28	13	36	3	802	1
Cannon Hill	Northbound	482	18	10	28	4	542	2
	Southbound	587	15	13	17	2	634	1
	Two-way	1069	33	23	45	6	1176	3
Powys Lane	Northbound	524	23	10	7	4	568	1
	Southbound	640	23	7	5	3	678	1
	Two-way	1164	46	17	12	7	1246	2
Forestdale	Eastbound	82	0	0	0	0	82	0
	Westbound	67	1	1	1	0	70	0
	Two-way	149	1	1	1	0	152	0

(Source: LBE. 15/10/97)

Note

(1) Total Excluding Pedal Cycles.

**Table 2.12 Aldermans Hill/Cannon Hill/Powys Lane Junction PM Peak (17.00 to 18.00)
Traffic Flow**

Link	Direction	Vehicle Type ⁽¹⁾					Total ⁽²⁾	P/C
		Car	MGV	HGV	Bu s	M/C		
Aldermans Hill	Eastbound	607	7	0	18	8	640	3
	Westbound	458	10	1	16	6	491	0
	Two-way	1065	17	1	34	14	1131	3
Cannon Hill	Northbound	827	8	1	21	20	877	4
	Southbound	598	8	3	20	6	635	4
	Two-way	1425	16	4	41	26	1512	8
Powys Lane	Northbound	1020	13	1	9	24	1067	6
	Southbound	638	12	4	6	8	668	3
	Two-way	1658	25	5	15	32	1735	9
Forestdale	Eastbound	117	3	0	0	0	120	0
	Westbound	121	7	0	0	0	128	0
	Two-way	238	10	0	0	0	248	0

(Source: LBE. 15/10/97)

Notes

(1) Car: Car/Taxi+LGV (Light Goods Vehicle); MGV: (Medium Goods Vehicle) <7.5 T;
HGV: (Heavy Goods Vehicle); M/C: (Motorcycle); and P/C: (Pedal Cycle).

(2) Total Excluding Pedal Cycles.

2.4 Cyclist & Pedestrian Movements

- 2.4.1 Existing and proposed cycle facilities are shown in the Council's Interim Transport Plan 2000/2001 (Figure 1 of the ITP). At present there are limited cycle facilities in close proximity to Broomfield Park. The nearest existing cycle route is Route 10 of the London Cycle Network (LCN), which runs broadly north/south across the Borough via the A10 Great Cambridge Road, continuing east/west for approximately one kilometre via the A406 North Circular Road, east of Broomfield Park.
- 2.4.2 There are, however, a number of LCN proposals in the vicinity of Broomfield Park, as shown in Figure 1 of the ITP. In particular, LCN proposals are in place north/south on Cannon Hill/Powys Lane and Green Lanes, with an east/west connection via Broomfield Lane. This proposed route directly borders the eastern, western and southern edges of Broomfield Park and gives direct access to Palmers Green rail station on Aldermans Hill. The proposed route on Broomfield Lane passes directly by the existing archway access to Broomfield House.
- 2.4.3 Broomfield Park is a high amenity pedestrian environment with a number of pedestrian access points around its perimeter. In particular, the park provides high quality north/south pedestrian links between Broomfield Lane to the south and Aldermans Hill to the north. As noted in the Planning Brief (11/11/98), pedestrian access is freely available to Broomfield House from all directions through Broomfield Park.
- 2.4.4 There are a number of existing pedestrian crossing facilities on Broomfield Lane. Central pedestrian refuges are located outside building numbers 31 and 21, the latter located directly east of the existing site access. Pedestrian accesses are located on either side of the historic archway, through the historic wall, affording segregated vehicular/pedestrian access to the site. Gated pedestrian accesses to the adjacent children's play area are located directly east of the archway.

2.5 Public Transport Accessibility

- 2.5.1 Baseline conditions with respect to public transport services and operations in the vicinity of Broomfield House have been established.
- 2.5.2 The Councils' ITP 2000/2001 includes a Borough-wide public transport accessibility map using the PTALs (Public Transport Accessibility Levels) methodology (Figure 2). Broomfield House's location is characterised by moderate to good public transport accessibility, being on the border of Level 3 (10 to 15 PTALs) and Level 4 (15 to 20 PTALs). This is mainly due to the proximity of Palmers Green rail station.
- 2.5.3 Palmers Green Station, on Aldermans Hill, is located within an approximate 5 minute walk time from Broomfield House. The rail station gives access to WAGN

southbound services to Moorgate and Kings Cross, via Finsbury Park. Northbound rail services run to Hertford North, Stevenage and beyond. The peak service frequency at Palmers Green Station is 9 to 10 minutes (London direction).

- 2.5.4 Arnos Grove London Underground (LU) Station is located within an approximate 15 minute walk time from the site. This station is situated south-east of the site, on the north side of Bowes Road. Arnos Grove LU Station gives access to Central London by Piccadilly Line via Finsbury Park and Kings Cross. This line goes also northbound to Southgate, Oakwood and Cockfosters. Pedestrian access/egress to/from Arnos Grove LU Station is via Bowes Road. The station is open Monday to Saturday from 05:10 to 1:15 hours and on Sunday from 06:50 to 24:15 hours. The peak service frequency is 2 to 3 minutes. Bounds Green LU Station is situated directly south of the site and is a broadly similar walk distance to that for Arnos Grove.
- 2.5.5 A number of local bus services run within a reasonable walk distance from the site, details of which are summarised in Table 2.13. There are no bus routes which operate on Broomfield Lane, directly past the site access. However, there are a number of local bus routes which operate within reasonable walk distance to/from Broomfield House. Bus routes 121 and W6 operate on Aldermans Hill, past Palmers Green Station. Bus routes 121, 329 and N29 run on Green Lanes, to the east of the site. Powys Lane is also a bus route and is served by route 299.

Table 2.13 Bus Frequencies

Route No.	Route	Peak ⁽¹⁾ Frequency	Operator
121	Enfield Lock-Southgate-Palmers Green-Turnpike Lane	10	Arriva London
299	Cockfosters-Southgate-Powys Lane-Muswell Hill	15	First Capital
329	Enfield-Palmers Green-Turnpike Lane	5	Arriva London
616	Winchmore Hill-Southgate-Palmers Green-Edmonton Green (schooldays only)	2 buses per schoolday	First Capital
629	Palmers Green-Enfield-Turkey Street (schooldays only)	2 buses per schoolday	Arriva London
W6	Southgate-Palmers Green-Edmonton Green	10	First Capital
N29	Trafalgar Square-Wood Green-Palmers Green-Ponders End	Night Bus	Arriva London

(Source: London Buses: Guide to Frequencies & Operators: Commencing 6 May 2000 and Central London bus guide: April 2000)

Note

(1) Peak frequency given in number of buses per peak hour (Monday to Friday).

2.6 Accident Records

2.6.1 Personal Injury Accident (PIA) statistical data for the Broomfield Park area has been obtained from LBE. Most recent data available for the past 3 years or 36 months from April 1997 to March 2000 has been provided.

2.6.2 PIA details are summarised by location in Table 2.14. Accident data is included in full at Appendix C, which includes a detailed accident plan provided by LBE.

2.6.3 Analysis of accident data for the past three years shows that there have been a total of 3 slight accidents on Local Access Roads adjacent to the site. One of these accidents occurred in close proximity to the Broomfield Lane/Powys Lane junction. a second occurred at the Broomfield Lane/Broomfield Avenue junction to the east of the site. The third accident took place near to the Broomfield Lane/Elmwood Avenue junction, this accident location is more than 250 metres from the historic archway site access.

2.6.4 A total of 73 accidents have occurred on the local highway network, 66 (90.4%) of which were slight and 7 (9.6%) of which were serious. There have been no fatal accidents during this time period. Of the total 73 accidents, 18 (24.7%) resulted in pedestrian casualties and 9 (12.3%) resulted in cyclist casualties.

Table 2.14 Summary of Personal Injury Accident Data

Location	Number of Personal Injury Accidents				
	Severity			Casualty Type	
	Slight	Serious	Total	Pedestrian	Cyclist
Node: Wilmer Way/Dawlish Avenue Junction	8	0	8	1	2
Link: Wilmer Way from Dawlish Avenue to Powys Lane	1	0	1	0	0
Node: Powys Lane/Wilmer Way Junction	4	0	4	0	0
Link: Powys Lane from Wilmer Way to Aldermans Hill	1	1	2	1	0
Node: Aldermans Hill/Cannon Hill/Powys Lane/Forestdale Junction	7	3	10	0	1
Link: Aldermans Hill from Powys Lane to Derwent Road	3	0	3	1	1
Node: Aldermans Hill/Derwent Road Junction	5	1	6	1	0
Link: Aldermans Hill from Derwent Road to Devonshire Road	7	1	8	6	0
Node: Aldermans Hill/Devonshire Road Junction	3	0	3	1	0
Node: Aldermans Hill/Green Lanes Junction	9	0	9	1	3
Link: Green Lanes from Aldermans Hill to Oakthorpe Road	4	0	4	1	2
Node: Green Lanes/Broomfield Lane Junction	9	0	9	4	0
Node: Broomfield Lane/Bridge Way Junction	2	0	2	1	0
Link: Broomfield Lane from Aldermans Hill to Broomfield Avenue	0	1	1	0	0
Node: Broomfield Lane/Broomfield Avenue Junction	1	0	1	0	0
Link: Broomfield Lane from Elmwood Avenue to Powys Lane	2	0	2	0	0
TOTAL	66	7	73	18	9

2.7 Parking Activity

- 2.7.1 Baseline parking survey data has been obtained from LBE to help identify existing patterns of on-street supply and demand.
- 2.7.2 Parking on Broomfield Lane in the vicinity of the site is unrestricted, with the exception of a short stretch of single yellow line directly outside the historic archway. Here parking restrictions are in force daily from 8.00am to 6.30pm.
- 2.7.3 LBE carried out a series of weekday parking surveys on Friday 23 July 1999. The surveys were carried out during the hours commencing 08.30, 13.00, 17.00 and 19.00 hours. The parking surveys recorded the location and type of vehicles parked on street and off-street in driveways (or in curtilages) throughout the survey area. Additional weekend parking surveys were undertaken by LBE on Saturday 7 and Sunday 8 October 2000 for two representative time periods identified as the hours commencing 11.00 and 14.00 hours. Parking survey data are included in full at Appendix D.
- 2.7.4 The parking survey area encompasses nearby streets within convenient walking distance of Broomfield House. The streets surveyed are: Powys Lane from Wilmer Way to Dawlish Avenue; Broomfield Lane from Powys Lane to the railway bridge east of Broomfield Avenue; the full extent of both Elmwood Avenue and Belmont Avenue and Broomfield Avenue from Pilgrim's Close to Hawthorne Avenue.
- 2.7.5 Rainy conditions were experienced during the Saturday 7 October survey. Parking survey staff noted that parking activity in Powys Lane on Saturday 7 October was associated with a tennis event in Broomfield Park. On Sunday 8 October parking in Broomfield Lane was associated with football on the sports ground and use of the children's play area.
- 2.7.6 On-street parking survey results are summarised in Table 2.15. The results give a breakdown of the type and total number of vehicles parked by street and time period. Parking survey results indicate a maximum weekday on-street parking demand of 41 vehicles (17.00) on Broomfield Lane. Survey results indicate maximum weekend on-street parking demands of 17 (Saturday 11.00) and 49 (Sunday 14.00). Low parking demand on Saturday may, in part, be a reflection of the rainy conditions.
- 2.7.7 Parking activity within 200 metres of the vehicle access to Broomfield House has been analysed in more detail. Vehicles do park on the north side of Broomfield Lane east of the entrance, but frequently restrict two-way movement. Parking along this section is not, therefore, included within the supply of available parking. Table 2.16 summarises the numbers of parking spaces available along Broomfield Lane excluding crossovers, dangerous locations etc.. By subtracting

observed demand the table shows spare spaces available at different time periods.

2.7.8 The results shown in Table 2.16 indicate that between 58 and 79 spaces are available on a weekday. On Saturday between 81 and 84 spaces are available, whilst on Sunday between 52 and 57 spaces are available.

2.7.9 Parking activity within the immediate vicinity of the historic archway has been examined in detail. The number of vehicles parked within 20 metres east and west of the archway access by time period is shown in Table 2.17. Results show a maximum weekday occupancy of 4 vehicles (17.00) and a maximum weekend occupancy of 6 vehicles (11.00 Sunday).

Table 2.15 Number of Vehicles Parked On-street by Street/Time Period

Street	Day	Time	Number of Vehicles Parked On-street ⁽¹⁾					Total
			Car	M/C	LGV	HGV	Other	
Broomfield Lane	Weekday	08.30	16	0	0	0	0	16
		13.00	28	0	1	0	0	29
		17.00	38	0	3	0	0	41
		19.00	26	0	2	0	0	28
	Saturday	11.00	17	0	0	0	0	17
		14.00	13	0	0	0	0	13
	Sunday	11.00	46	0	0	0	0	46
		14.00	47	0	2	0	0	49
Broomfield Ave.	Weekday	08.30	64	0	1	0	1	66
		13.00	63	0	4	0	1	68
		17.00	59	0	3	0	0	62
		19.00	66	0	3	0	0	69
	Saturday	11.00	68	0	8	0	0	76
		14.00	66	0	5	0	0	71
	Sunday	11.00	70	0	5	0	0	75
		14.00	62	0	5	0	0	67
Belmont Avenue	Weekday	08.30	47	0	0	0	1	48
		13.00	38	0	0	0	1	39
		17.00	45	0	1	0	1	47
		19.00	54	0	2	0	1	57
	Saturday	11.00	43	0	2	0	0	45
		14.00	49	0	4	0	0	53
	Sunday	11.00	57	0	3	0	0	60
		14.00	53	1	2	0	0	56
Elmwood Ave.	Weekday	08.30	16	1	2	0	0	19
		13.00	13	1	2	0	0	16
		17.00	16	1	2	0	0	19
		19.00	20	1	2	0	0	23
	Saturday	11.00	16	1	2	0	0	19
		14.00	16	0	2	0	0	18
	Sunday	11.00	19	1	2	0	0	22
		14.00	17	1	2	0	0	20
Powys Lane	Weekday	08.30	10	0	1	0	0	11
		13.00	15	0	3	0	0	18
		17.00	18	0	2	0	0	20
		19.00	19	0	0	0	0	19
	Saturday	11.00	29	0	1	0	0	30
		14.00	37	0	1	0	0	38
	Sunday	11.00	9	0	1	0	0	10
		14.00	17	0	1	0	0	18

(Source: LBE: July 1999 & October 2000)

Note

(1) Car (Car/Taxi); M/C (Motorcycle); LGV (Light Goods Vehicle); HGV (Heavy Goods Vehicle); Other (Skip).

Table 2.16 Broomfield Lane Available On-street Parking Supply Summary

Street	Side	Total Spaces	Number of Available Spaces by Time Period							
			Weekday				Saturday		Sunday	
			0830	1300	1700	1900	1100	1400	1100	1400
East of Arch	South	29	23	15	14	19	23	25	9	15
West of Arch	North	30	25	21	14	21	25	26	19	15
	South	38	31	31	30	30	33	33	24	27
Total	Both	97	79	67	58	70	81	84	52	57

Table 2.17 Summary of Parking Activity in Proximity to the Archway Access

Street	Street Side	Number of Available Spaces by Time Period							
		Weekday				Saturday		Sunday	
		08.30	13.00	17.00	19.00	11.00	14.00	11.00	14.00
East of Archway	North	0	1	0	0	0	0	1	0
	South	0	0	0	0	0	0	0	0
West of Archway	North	1	2	3	3	0	1	3	3
	South	0	0	1	0	0	0	2	0
Total	Both	1	3	4	3	0	1	6	3

3 Site Development Proposals

3.1 General

- 3.1.1 The Broomfield House Task Force (BHTF) has been established by LBE to secure the future of Broomfield House. The main house, which is Grade II* Listed, is currently in a state of disrepair following a succession of fires over the past two decades. The historical value of Broomfield House, notably the Lanscroun murals, is reflected in its listed status and is detailed in the Feasibility Study for the restoration and refurbishment project (Donald Insall Associates, October 2000).
- 3.1.2 In addition to the reconstruction and refurbishment of the main house and the restoration of the surrounding historic park, development proposals include the conversion of the stable block. This would be the subject of a separate planning application.
- 3.1.3 Site proposals are described below in detail and the following sections describe the wider access, parking and visitor management strategy.

3.2 Development Proposals

- 3.2.1 Broomfield Park is essentially an 'island' green space situated within a largely residential urban environment in close proximity to Palmers Green Designated Town Centre. The park provides a high amenity resource for the local community and also draws visitors from further afield in North London, such is its attraction.
- 3.2.2 The variety of park uses, including a children's playground, sports facilities, gardens and open green space meet a range of local needs. Broomfield Park also provides a venue for a number of special events, such as travelling fairs, held sporadically throughout the year. However, it is recognised that the park currently lacks refreshment facilities for visitors and that the potential of Broomfield House is not currently being realised.
- 3.2.3 The development proposals provide a rare opportunity to return the historic Broomfield House to its former state. The objective of the proposals is not only to restore the main house sensitively, but to create an integrated and attractive development that will become an invaluable focal point for the local community from the surrounding residential areas.
- 3.2.4 Transport access, parking and servicing needs must be met if proposals are to achieve their design objectives. The emphasis in the planning and design of proposals has been to maximise accessibility by non-car modes of travel in recognition of the local catchment populations that they will serve.

- 3.2.5 Outline BHTF proposals for the site comprise mixed community and leisure uses. Broomfield House would be open throughout the week, during both the daytime and evenings, including weekends. Proposed hours of opening for the main house are from 10.00am to 10.00pm.
- 3.2.6 The feasibility of two options, Option 1 and Option 2, are currently being considered. Community proposals are identical for both options, but there is some variation in the ground floor café/restaurant facilities proposed.
- 3.2.7 Community rooms are proposed for both the ground and first floors of Broomfield House. The two community rooms proposed for the ground floor have an overall capacity of approximately 50 people. A further six community rooms of varying size, with a total capacity of approximately 70 people, are proposed for the first floor. The community rooms have been designed to facilitate flexible usage and would be used for a variety of activities, including daytime educational uses; access to Information Technology (IT); exhibitions; conference/seminar use and community meetings and other events.
- 3.2.8 Option 1 includes a ground floor café/restaurant with servery with approximately 60 covers. Proposals also include an additional 30 covers externally on the terrace for park visitors. Option 2 comprises a restaurant with table service, also with approximately 60 covers, in addition to the same terrace seating. These two options are anticipated to have different customer profiles. The Option 1 café/restaurant is expected to have a customer profile oriented towards daytime usage and would be used extensively by community room users. Conversely, the Option 2 restaurant is expected to have a customer profile oriented more towards evening usage, with less interface between the community and restaurant uses.
- 3.2.9 Proposals for the first floor of Broomfield House also include two display areas, an administration office and a small residential unit for a resident with a caretaker and/ or security function. These proposals are common to both options.
- 3.2.10 The feasibility of converting the Broomfield House Stable Block into a day centre for disabled children and young people and adults with special needs is currently being considered. The stable block is a Grade II* Listed two-storey building situated within the stable yard directly south of the main house.
- 3.2.11 The day centre would be run by Radiomathon, a Charity with strong links with the Greek Community in Enfield and further afield. The day centre is proposed to meet local community needs and would offer services during the daytime and evening periods, including weekends.
- 3.2.12 The proposed day centre offers a range of activities and services, including a morning and afternoon parent toddler group; after school (4.00pm to 6.30pm) play schemes and clubs; a youth club in addition to training and social opportunities for adults with special needs (9.30am to 3.30pm).

3.3 Site Access Proposals

- 3.3.1 Site access proposals seek to encourage access to the site by a range of alternative transport modes to help foster a sustainable and readily accessible development whilst meeting essential vehicular access requirements. In particular, access requirements for site residents, essential staff, the disabled, park maintenance staff, service and emergency access need to be satisfied. Service access proposals are addressed separately in section 3.5.
- 3.3.2 Existing vehicular access to the site is via the historic archway on Broomfield Lane. JMP has identified a number of access constraints, including poor visibility and potential pedestrian/vehicular conflicts with pedestrians crossing in front of the access. This is a particular concern given the adjacent children's playground.
- 3.3.3 JMP has developed a site access strategy which retains two-way vehicular access via the historic archway. A series of design solutions are proposed to overcome existing access constraints identified above. Site access design proposals are considered further in Section 5.2.

3.4 Parking Proposals

- 3.4.1 JMP has developed a parking strategy which meets the parking needs of site residents, the disabled, essential staff and site visitors, in particular parents/carers visiting the day centre. Parking proposals utilise the stable yard to meet parking demands off-street, in addition to limited parking on the Avenue for disabled visitors to Broomfield House.
- 3.4.2 Disabled parking equivalent to 5% of total on-site parking provision will be met. Parking proposals include dedicated staff and disabled parking for the day centre, in addition to a pick-up/drop-off point sufficiently large to accommodate a minibus.
- 3.4.3 Car and cycle parking standard requirements, where known, are summarised in Table 3.1 overleaf. These are based on car and cycle parking standards shown in Tables 1.1 and 1.2 above. This gives a total provision of 115 car spaces and 10 cycle spaces. This parking provision is based on the application of the D1 Use Class (public or exhibition hall) standard, although this could vary depending upon how the D1 community use standard is interpreted.
- 3.4.4 Parking layout design proposals are considered further in Section 5.3.

3.5 Servicing and Deliveries

- 3.5.1 Development proposals will generate the need for additional service (e.g. refuse collection) and delivery vehicles, particularly the proposed café/restaurant facility. The number of vehicles is anticipated to be low, but adequate provision needs to be made to ensure safe access, loading/unloading and turning arrangements.

Table 3.1 Parking Standards Requirement

Land Use	Staff/Visitor	Units (No. Staff/GFA/ public/seating area m ²)	No. Parking Car	Spaces Cycle
Community	Staff	3	1	3
	Visitor	540m ² seating area	60	
Café/Restaurant	Staff	11	-	-
	Visitor	238m ² public area	48	4
Day Centre	Staff	11	6	3
	Visitor	-	-	-
Total			115	10

- 3.5.2 Service and delivery vehicles are required to access the main house via the Avenue, to access refuse stores and service entrances towards the rear of the building. A service bay will be provided on the southern side of the wall for delivery and service vehicles to use whilst loading/unloading takes place. Trolleys will be used to transport materials to/from the main house.
- 3.5.3 A turning facility will be provided in the drive to facilitate service access. Proposals for servicing and deliveries will be consistent with the wider landscape design proposals and will not compromise the setting of the main house.
- 3.5.4 Design proposals for servicing and deliveries are considered further in Section 5.4.

4 Travel Characteristics

4.1 General

4.1.1 Development proposals for Broomfield House will alter the travel needs of the site. The proposed community and leisure uses will increase the travel demands currently generated by the site. This section of the report seeks to quantify this change in travel demand. Section Five will examine how a number of design and management solutions will assist the accommodation of additional travel demands.

4.2 Travel Projections

4.2.1 Broomfield House is situated in a predominantly residential area of Enfield. Given the nature of the community and leisure uses proposed, most of its visitors are expected to come from within a local catchment area.

4.2.2 Following discussions with Council officers, it was agreed that the Millfield House Arts Centre provides the nearest comparator to community proposals for Broomfield House. Millfield House Arts Centre is located east of the A406 North Circular Road/A10 Great Cambridge Road Interchange in Edmonton, Enfield. Millfield House Arts Centre is Council run and occupies an historic property, not dissimilar to Broomfield House. The centre has a designated car park with a total of 27 spaces, 3 of which are reserved for disabled parking.

4.2.3 The Millfield House Arts Centre, with a gross floor area (GFA) of approximately 500m², offers eight rooms of varying size for a range of uses, including community activities, educational and leisure classes, conferences/seminars, training courses and other events. Surveys have been carried out at this location and are reported on below.

4.2.4 The Millfield House Arts Centre surveys were carried out on Wednesday 4 October 2000, this being confirmed by the centre manager as a typical day with a variety of on-site activities taking place. A representative sample of visitors arriving at and departing from the centre were interviewed and asked a series of questions concerning their visit purpose and mode of travel. A record of total visitors entering and leaving the centre was kept throughout the 8.00am to 10.00pm survey period. Sample copies of the survey questionnaire and pedestrian count forms are included at Appendix E.

4.2.5 A total of 456 interviews were completed, representing 76.3% of the total number of persons counted, i.e. relative to the total count base of 598 (i.e. 299 arrivals and 299 departures) on the survey day. Survey results have been analysed using the SPSS statistical software package. The daily profile of arrivals and departures to and from Millfield House is shown in Table 4.1.

Table 4.1 Millfield House Arts Centre Daily Arrival & Departure Profile

Time Period	Number/% Trips by Hourly Time Period					
	Arrivals		Departures		Total ⁽¹⁾	
	No.	%	No.	%	No.	%
08.00 to 09.00	4	1.3	0	0.0	4	0.7
09.00 to 10.00	52	17.4	1	0.3	53	8.9
10.00 to 11.00	14	4.7	3	1.0	17	2.8
11.00 to 12.00	7	2.3	2	0.7	9	1.5
12.00 to 13.00	3	1.0	7	2.3	10	1.7
13.00 to 14.00	9	3.0	10	3.3	19	3.2
14.00 to 15.00	6	2.0	24	8.1	30	5.0
15.00 to 16.00	5	1.7	4	1.3	9	1.5
16.00 to 17.00	53	17.8	51	17.1	104	17.4
17.00 to 18.00	28	9.4	20	6.7	48	8.0
18.00 to 19.00	74	24.7	94	31.5	168	28.1
19.00 to 20.00	34	11.4	44	14.7	78	13.0
20.00 to 21.00	10	3.3	6	2.0	16	2.7
21.00 to 22.00	0	0.0	10	3.3	10	1.7
22.00 to 23.00	0	0.0	23	7.7	23	3.8
Total	299	100	299	100	598	100

4.2.6 Millfield House Arts Centre visitors and staff were asked to state their primary mode of travel to and from the site and the results are shown in Table 4.2.

Table 4.2 Millfield House Arts Centre Mode Split Summary

Trip Mode	Visitors		Staff	
	Number	%	Number	%
Car Driver	292	51.1	18	65.8
Car Passenger	201	35.2	0	0
Motorcycle	3	0.6	0	0
Bus	36	6.3	4	15.6
Rail	12	2.1	1	3.6
Pedal Cycle	2	0.4	0	0
Walk	25	4.3	4	15
Total	571	100	27	100

4.2.7 Survey results indicate that the majority of visitor trips to Millfield House Arts Centre are car-based (86%), with a minority of bus, rail and walk trips (12.5%). The centre manager confirmed that the site is heavily oriented towards the car, despite relatively short-distance trips for community activities. Car use at Millfield House is higher than expected and may be partly a result of the A406 North Circular Road on the southern edge of the site, which acts as a significant barrier to walk and cycle trips from residential areas to the south.

- 4.2.8 Following discussions with Council officers, the Millfield House Arts Centre was selected as a comparable site to Broomfield House, primarily on the basis of similar on-site community and other activities. Whilst the daily person trip rate derived from the Millfield House surveys is comparable to that expected at Broomfield House, the mode split pattern is not considered truly representative. Broomfield House is situated within a predominantly residential area with good pedestrian links and no significant barrier (such as the A406) to visitor access.

4.3 Travel Characteristics

- 4.3.1 Broomfield House trip generation and modal characteristics have been derived from a number of data sources. These sources include the Millfield House Arts Centre survey interviews, described above, and information extracted from the TRAVL (Trip Rate Assessment Valid for London) database originally developed by the London Research Centre. The latter comprises a multi-modal travel survey database for a variety of land use sites in London.

- 4.3.2 Travel characteristics have been examined for six distinct categories: community staff/visitor and café/restaurant staff/visitor trips to/from Broomfield House, in addition to staff/visitor trips to/from the proposed day centre for the converted stable block. Trip assessment methodologies and assumptions for each of the six categories are outlined below. JMP has developed an EXCEL spreadsheet to carry out the trip assessment for Broomfield House. Spreadsheet output is included at Appendix F.

Community Staff

- 4.3.3 A total of three staff for community uses at Broomfield House are assumed: a site manager, an assistant and a resident caretaker. The manager and assistant are assumed to work conventional office hours and are assumed to make an additional trip during the working day. One of these staff is assumed to make car-based trips, the other is assumed to make non-car based trips. The caretaker is assumed to have a car parked on-site. Community staff trip assessment is included at Appendix F.

Community Visitors

- 4.3.4 Visitors to Broomfield House have been derived using a trip rate based on the number of trips per unit of maximum room capacity in persons. This trip rate and the daily visitor profile have been derived from the Millfield House Arts Centre survey. The % arrivals/departures by hourly time period have been applied, having been adjusted to allow for the difference in hours of opening. Mode split patterns from Millfield House have been applied without adjustment, although Broomfield House is considered to be more accessible by public transport and to have a greater local catchment area within walking distance. It is proposed that travel to Broomfield House would be monitored through a Green Travel Plan

which would promote non-car access. Community visitor trip assessment is included at Appendix F.

Café/Restaurant Staff

- 4.3.5 A total of eleven staff for café/restaurant uses at Broomfield House are assumed. Staff comprise a proprietor, assumed to be a car driver, in addition to ten staff (two shifts/day with five staff each), assumed to make non-car based trips from the local area. Staff numbers have been derived from comparable restaurant sites in TRAVL which give the ratio of number of employees to number of covers. Café/restaurant staff trip assessment is included at Appendix F.

Café/Restaurant Visitors

- 4.3.6 Option 2, with a higher proportion of trade from non-park users and hence greater car use, has been taken as the basis for assessment as it represents a 'worst case' scenario for access and parking requirements. The daily visitor profile for café/restaurant uses at Broomfield House has been derived from TRAVL. A comparable site representative of Option 2 proposals was selected. The TRAVL site is characterised by lunchtime and evening visitor peaks and relatively high car use. TRAVL output is included at Appendix G. The % arrivals/departures by hourly time period have been applied, having been adjusted to allow for the difference in opening hours. Mode split patterns from TRAVL have also been applied. The trip rate is based on the number of covers. Café/restaurant visitor trip assessment is included at Appendix F.

Day Centre Staff

- 4.3.7 A total of five core staff are assumed to work full-time at the proposed day centre. These core staff are assumed to work from 9.00am to 5.00pm. An additional six part-time staff (two shifts/day with three staff each) are also assumed. Information on staff numbers was provided by Council officers. A 50/50 car/non-car mode split has been assumed., with non-car based staff trips evenly split between walk and rail modes. This assumption is based on a local staff catchment, site accessibility characteristics and dedicated on-site parking provision for Radiomathon staff. Day centre staff trip assessment is included at Appendix F.

Day Centre Visitors

- 4.3.8 Attendance at the day centre is assumed to be 30 children/young adults. Two sessions have been assumed, the first from 9.00am to 4.00pm and the second from 4.00pm to 7.00pm. These timings are based on information provided in the Radiomathon Business Plan for the day centre (July 1999). For the 9.00am to 4.00pm session 12 children are assumed to arrive/depart by minibus, a further 12 by car and the remaining 6 on foot. It is assumed that half of the car drivers (i.e. 6

parents/carers) park and remain at the centre for the session. The other 6 car drivers are assumed to drop-off children and return at 4.00pm.

- 4.3.9 For the 4.00pm to 7.00pm session 24 children are assumed to arrive/depart by car, with the remaining 6 on foot. All 24 children are assumed to be dropped-off and picked-up later. JMP has examined the travel characteristics of similar sites, e.g. nurseries, on the TRAVL database, however no sites match the specific characteristics of the proposed day centre. A higher % car use than that typical for such sites (approximately 33% for nurseries) has been assumed to reflect the special needs of the site. A number of visitors are also assumed to access the site via a minibus service. Day centre visitor trip assessment is included at Appendix F.

4.4 Total Travel Demand

- 4.4.1 JMP has assessed the total travel demand generated by proposals for Broomfield House and the stable block. Trip assessment % mode split assumptions for all six categories are summarised in Table 4.3. The total number of daily person trips by mode and time for all Broomfield House and stable block proposed uses is included at Appendix F. The total maximum parking accumulation for each hourly time period is also given.
- 4.4.2 Daily person trips by mode are summarised in Table 4.4. This gives the number of daily staff and visitor trips by land use and mode and the total number of daily trips for all uses. A daily total of 452 one-way person trips to Broomfield House and the stable block is predicted. Two-thirds (68%) of these trips are car-based and the remaining third (32%) are non-car based.
- 4.4.3 Vehicle trip generation results, i.e. number of car trips, generated by the Broomfield House proposals are summarised in Table 4.5. The maximum parking accumulation for each time period is also shown. Maximum parking accumulation values are derived from numbers of arrivals and departures over an hourly period.
- 4.4.4 Modal assessment and trip generation analysis suggests that the leisure and community proposals at Broomfield House and the converted stable block would generate a total of 5, 18, 15, 88 and 22 vehicle movements during the AM, Inter, PM, Early and Late Evening Peaks respectively. The maximum number of vehicle movements occur during the early evening period between 6.00pm and 7.00pm, with a total of 88 vehicle movements. A maximum parking accumulation of 32 vehicles occurs over the lunchtime period between 1.00pm and 2.00pm.
- 4.4.5 The predicted number of vehicle trips is a 'worst case' scenario for two main reasons. Firstly, Millfield House Arts Centre mode split survey results have been applied directly to Broomfield House, although the former is considered to be more car-oriented as a result of local conditions (see section 4.2.7). Broomfield

House is situated within a highly residential area with no significant barriers to pedestrian access in the immediate area. The site is also conveniently located in relation to Palmers Green Station. Second, visitor trips to the café/restaurant are assumed to be external to the site. In reality linked trips would be expected between community and café/restaurant uses, especially for Option 1 proposals.

- 4.4.6 The quantitative assessment of total travel demand for the site proposals has been undertaken for a typical busy weekday when facilities will be operating at capacity. During the weekend period both Broomfield House and Radiomathon will be operational, although maximum traffic and parking demands are not expected to exceed those predicted for a weekday. As traffic flows on Broomfield Lane at the weekend are lower than on a weekday the proposed access solution should be adequate to cater for traffic movements. There is a higher observed level of parking on sections of Broomfield Lane at the weekend than on weekdays, but all parking demands associated with Broomfield House are proposed to be met on-site. There may be exceptional events, such as weddings, held at Broomfield House for which special management arrangements will be required.

Table 4.3 Broomfield House Mode Split Summary

Land Use	Trip Type	% Mode Split								Total
		Car-based				Non-car Based				
		Car	Car	M/C	Bus	Rail	Pedal	Walk	Taxi	
		Driver	Pass	Cycle						
Community	Staff	33.3	0	0	0	0	0	66.7	0	100
	Visit	51.1	35.2	0.6	6.3	2.1	0.4	4.3	0	100
Café/ Restaurant	Staff	9.1	0	0	9.1	9.1	18.2	54.5	0	100
	Visit	26.7	25	0	4.2	9.1	0	25.0	10	100
Day Centre	Staff	45.4	0	0	0	18.0	9.3	27.3	0	100
	Visit	52.4	28.6	0	9.5	0	0	9.5	0	100

Table 4.4 Broomfield House Daily Person Trips by Mode Summary

Land Use	Trip Type	Number of Daily Person (One-way) Trips by Mode								Total
		Car-based				Non-car Based				
		Car	Car	M/C	Bus	Rail	Pedal	Walk	Taxi	
		Driver	Pass	Cycle						
Community	Staff	2	0	0	0	0	0	4	0	6
	Visit	66	46	1	8	3	1	6	0	130
Café/ Restaurant	Staff	1	0	0	1	1	2	6	0	11
Restaurant	Visit	45	42	0	7	15	0	42	17	168
Day Centre	Staff	5	0	0	0	2	1	3	0	11
	Visit	66	36	0	12	0	0	12	0	126
TOTAL	All	185	124	1	28	21	4	73	17	452

Table 4.5 Broomfield House Total Vehicle Trip Generation Summary

Time Period	Peak	No. Vehicle Trips			Max. Parking Accumulations
		Arrivals	Departures	Total	
08.00 to 09.00	AM Peak	5	0	5	6
13.00 to 14.00	Inter Peak	11	7	18	32
17.00 to 18.00	PM Peak	7	8	15	16
18.00 to 19.00	Early Evening	42	46	88	13
21.00 to 22.00	Late Evening	8	14	22	12
08.00 to 24.00	Daily	185	185	370	32

5 Design and Management Solutions

5.1 General

- 5.1.1 The regeneration of Broomfield House and its surroundings for community and leisure uses is contingent upon finding satisfactory solutions to its access and parking problems. Access to the site is highly constrained and clearly needs to be improved if the redevelopment is to support the proposed uses. The special requirements of the redevelopment proposals will necessitate some on-site parking and this need has also been addressed.
- 5.1.2 Access and parking solutions are based on a thorough assessment of existing conditions in the areas around Broomfield House, as reported in Section Two above. In addition, the site has been visited on several occasions to assess both vehicle and pedestrian needs; this has included a thorough assessment of any physical constraints on safety.
- 5.1.3 In the previous section of this report all travel demands associated with the Broomfield House redevelopment proposals were assessed and quantified by mode and time of day. The proposed solutions described below are fully compatible with the projected travel and parking demands and overcome problems associated with the existing vehicle access.
- 5.1.4 The travel needs of staff and visitors to Broomfield House and Radiomathon have been assessed in the context of the accessibility of the site by all modes of travel. Parking with Broomfield Park will remain limited and will need to cater for different needs, hence it is important that proposals incorporate measures to encourage the use of alternatives to the car wherever possible. The appropriate means to achieve this is through a Green Travel Plan, to which consideration is given below.

5.2 Access Improvements

- 5.2.1 Vehicular access to Broomfield Park is via an uncontrolled junction opposite 21 Broomfield Lane. The location of this access on a tight bend is clearly not ideal, but solutions are constrained by the need to retain the integrity of the historic listed wall around the park. Site investigations have been undertaken to assist the design of an appropriate solution.
- 5.2.2 The current site access and its junction have a number of problems:
- The wide bell mouth junction is not conducive to proper observation of priorities, particularly by vehicles leaving the park and turning left.

- Cars are observed to park within the junction and this further constrains vehicle manoeuvres and limits driver visibility.
- Visibility to the right for vehicles leaving the park is limited by the wall and the tight bend just to the south, a problem further exacerbated by a tree in the footway.
- Pedestrian crossing opportunities on Broomfield Lane are limited and parked cars reduce visibility.
- There is a strong pedestrian desire line across the junction, including many children, which has no clear path across the junction.
- Vehicles emerging from the park have very limited visibility to left and right and drivers are unable to see pedestrians crossing immediately in front of the archway.

5.2.3 A range of possible solutions has been considered to overcome these problems. Previous schemes for Broomfield House have considered a break in the wall to the south of the existing access, but we rejected this approach due to the limited visibility on this length of Broomfield Lane. The proposed solution is illustrated in Figure 5.1. The scheme has been discussed with the Council and has been subject to a Stage 1 safety audit, which establishes any inherent risks to safety or design faults, and is reported on below (para. 5.2.11).

5.2.4 The design philosophy is to narrow the access junction as much as possible to provide safer and better regulated movement for both vehicles and pedestrians. The bell mouth access has been replaced by a conventional junction form that makes vehicles undertake right angle turns into and out of the park, thus minimising speed and giving clear give way priorities. By bringing the give-way or stop-line forward, vehicles leaving the park have improved visibility to the right. Visibility criteria are given in Places, Streets and Movement (DETR, September 1998). Table A on page 58 gives Y values (major road sight distances) where the 85th %ile speed has been observed. The observed speed on Broomfield Lane is less than 30 mph, hence taking 30 mph as the appropriate speed gives a Y value of 33 metres from a point 2.4 metres back from the give-way line. The design achieves a sight distance well in excess of this requirement. The junction design is consistent with the maximum projected flow of approximately 80 to 90 vehicles per hour two-way through the archway.

5.2.5 The junction area has been minimised consistent with the needs of refuse, emergency vehicle and delivery vehicles to access the site. The turning circles of these vehicles have been checked to ensure that the swept paths available are adequate. The narrow gap through the archway is the effective constraint on vehicle size and the largest delivery vehicle possible will be 7.5 tonnes gross.

- 5.2.6 Safety of pedestrians is paramount in the design solution and this is achieved in several ways. Firstly, the reduced width junction would be subject to an entry treatment comprising a raised speed table to reduce vehicle speeds and facilitate pedestrian crossings. The area shown in Figure 5.1 would comprise a 75mm speed table with 1:15 ramps up to footway level. Pedestrians would cross in a delineated area at footway level.
- 5.2.7 The second consideration is to the point of pedestrian crossing. A particular design objective was to keep pedestrians clear of the archway to improve driver visibility. This has been achieved by off-setting the crossing point away from the archway and protecting it with bollards which would also encourage pedestrians to cross in the right location. This is reinforced by deterrent paving in two triangles against the park wall which effectively forces pedestrians away from the archway. At present, the forward visibility for drivers to pedestrians is effectively zero; the proposed design would give drivers a minimum of 5 metres visibility to pedestrians waiting to cross at the revised location.
- 5.2.8 Thirdly, it is important to slow vehicles leaving the park as much as possible. The entry treatment includes a ramp on the park side and before this rumble strips would be set. The latter would comprise granite setts with their rough sides upward to provide a limited jolt without impeding pedestrians. Finally, a form of entry control is included comprising a rising bollard operated by inductive loops. In effect, any vehicle entering or leaving the park will have to stop and wait for the bollard to descend.
- 5.2.9 A combination of measures taken to enhance pedestrian safety should ensure that amenity is improved. The changes to the arrangement at the archway ensure that design standards for visibility of pedestrians at minor junctions are achieved.
- 5.2.10 The design solution includes a marked right-turn area into the site from Broomfield Lane and an additional pedestrian crossing to the south of the access. The pedestrian islands will protect vehicles waiting to turn at the junction. The revised layout would necessitate the extension of waiting and loading restrictions on the north side of Broomfield Lane, as shown. The removal of parked vehicle close to the park entrance would further improve visibility.
- 5.2.11 A Stage 1 safety audit for the proposed access design solution has been carried out, the findings of which are reported in a self-standing document (JMP, January 2001). The safety audit has not identified any fundamental issues with respect to the design proposals, however it suggests a number of minor modifications to improve vehicular and pedestrian safety which will be incorporated into the detailed design.
- 5.2.12 The safety audit did raise some concerns about the proposed rising bollard which would need to be addressed before it could be taken forward as a design solution. The design modifications suggested by the safety audit would overcome

most residual concerns regarding pedestrian safety and reduce the need for a rising bollard solution. It is proposed, therefore, that the design should be developed without a rising bollard and this only be considered further if the stage 2 safety audit identifies a need for further safeguards.

5.3 Parking Layout

- 5.3.1 In the previous section the need for a maximum of 32 parking spaces was identified consistent with projected travel demands. Whilst this is seen as very much a worst case, it does not include general park visitors and makes no allowance for an intensive occasional use of Broomfield House, for example for a wedding. In general, the design aim is to provide at least 32 spaces. LBE parking standards indicate a maximum provision of up to 115 spaces, depending upon how the D1 community use standard is interpreted. Such a level of provision is not considered to be an appropriate given the Council's objectives to deter unnecessary car use.
- 5.3.2 The Avenue leading from the main gate to the House is not considered suitable as a location for general parking. There will be delivery activity on the north side and pedestrian movement along its length. Whilst not precluding parking strictly on safety grounds, we consider the potential conflicts and the difficulties of regulating parking to mitigate against the use of this area.
- 5.3.3 Parking for the disabled needs to be close to the activity with which it is associated, hence we would recommend that two spaces be included on the south side of the Avenue opposite Broomfield House. Also, if proposals are to include a residential caretaker on-site, a space for his or her use in the same location would be acceptable. We would like to see access to the Avenue west of the entry to the stable yard narrowed by bollards, one of which would be lockable to deter the unauthorised use of this area for parking.
- 5.3.4 We propose that the bulk of the parking requirement would be met by a surface layout of marked bays within the stable yard. A scheme is illustrated in Figure 5.2. There are a number of constraints on layout and only areas known to be available have been included. The wall on the west side of the entrance is a major constraint as it adversely affects vehicle circulation.
- 5.3.5 The parking layout shown comprises a one-way clockwise gyratory system with marked bays. Aisle widths correspond with design standards and the layout has been tested using AutoTrack to ensure that swept paths can be accommodated.
- 5.3.6 Four bays have been provided for residents of the houses within the stable yard, but these were not included within the demand requirement calculated. Five spaces have been dedicated for Radiomathon staff, although these could be reserved for special needs visitors if required. A disabled space is shown in the same block which could also be controlled or locked as necessary.

- 5.3.7 It is assumed that a proportion of visitors to Radiomathon would be dropped-off by minibus or parents/carers, hence a facility for this is shown thus obviating the need for permanent parking spaces.
- 5.3.8 The bulk of the parking in the stable yard comprises 31 uncontrolled spaces for general visitor use associated with either Radiomathon or Broomfield House. It is not proposed that these spaces be allocated, lockable or charged, but be available for general use on a first come first served basis.
- 5.3.9 The total number of spaces provided (excluding residents) would be 37 in the stable yard and 3 in The Avenue, a total of 40 spaces. This exceeds the maximum demand of 32 spaces, thus giving a comfortable margin to ensure that all needs associated with Radiomathon during its hours of operation are met. The margin could accommodate some of the parking that currently occurs on-street in Broomfield Lane, providing a benefit to residents. Maximum parking demand on Saturdays and Sundays is expected to be lower and this would result in spaces being available for general park use thus reducing the level of on-street parking.
- 5.3.10 It is not considered necessary to regulate the parking supply in any way, although usage should be monitored and arrangements reviewed if specific needs are being compromised. However, for the level of parking proposed, visitor management would not be cost effective without charging. If problems arise, more allocated spaces could be dedicated to Radiomathon. However, any increase in dedicated parking should be considered in the context of the proposed Green Travel Plan to ensure that it is consistent with objectives to minimise car use. All day parking by staff or visitors prevents spaces being used several times over by short stay parkers.
- 5.3.11 It is not considered necessary limit the times of access to the stable yard parking, particularly given the specific needs of conferences, the restaurant etc.
- 5.3.12 There is a requirement for cycle parking associated with planned uses of approximately 10 spaces. Day centre cycle parking facilities would be accommodated within the stable yard at detailed design stage once the precise status of existing and planned buildings has been finalised. It is considered that there is scope to provide this level of parking without loss of car spaces. The remainder of the cycle parking provision for community and café/restaurant uses would be positioned close to the main house.

5.4 Servicing and Deliveries

- 5.4.1 The needs of Broomfield House are expected to be highly limited with only one or two deliveries by suppliers per day. Service and delivery vehicles would be provided with a dedicated unloading area at the side of the House.

5.4.2 It will be necessary to create a turning head for service and delivery vehicles at the end of the Avenue. This has not been shown as any solution must be consistent with landscaping proposals for the House.

5.5 Travel Plan

5.5.1 The development of the accessibility strategy could form the basis for a Travel Plan for Broomfield House. Draft Regional Planning Guidance (RPG9), in particular, places significant emphasis on the usefulness of travel awareness campaigns and travel plans to achieve sustainable transport objectives, as detailed in Policy T2. RPG9 (9.9.) recognises that Travel Plans can contribute to the delivery of sustainable transport objectives by encouraging:

- reductions in journeys by car (particularly at peak hours and for single occupancy journeys);
- reductions in the level of car parking required to support existing and additional land use proposals;
- increased use of walking, cycling and public transport;
- reduced traffic speeds and improved safety particularly for pedestrians and cyclists; and,
- more environmentally friendly delivery and freight movements, including home delivery services.

5.5.2 Such sustainable transport objectives already form the key elements of the access strategy for the site that could form the basis of a Travel Plan to encourage the use of non-car modes of travel.

5.6 Conclusions

5.6.1 The regeneration of Broomfield House and its surroundings is contingent upon finding a satisfactory solution to the access and parking problems that currently constrain the accessibility of the site.

5.6.2 The existing vehicular access to Broomfield Park from Broomfield Lane is located on a bend and has poor visibility for drivers leaving the park in respect of both vehicles and pedestrians.

5.6.3 Whilst Broomfield Lane is a busy road, and is clearly used as a rat-run, speed and accident data, together with observations of highway geometry, do not preclude the use of the existing access to serve the development. However,

improvements are required if an intensification of uses is to be supported by a safe means of access.

- 5.6.4 Travel demands associated with the proposals for Broomfield House have been assessed and maximum vehicle flows and parking demands used as the basis for design and layout solutions.
- 5.6.5 A feasible access solution has been designed that meets a number of objectives, particularly the aim to ensure that increased vehicle flows through the archway do not compromise pedestrian safety. A comprehensive solution is proposed that has a number of traffic and safety advantages and which is consistent with the estimated traffic volumes.
- 5.6.6 Parking proposals and an indicative parking layout for the stable yard would provide 40 car spaces and a drop-off area for the proposed uses. Whilst this exceeds the estimated peak parking demand, it is considered to be warranted as it should ensure that all needs are met at all times, whilst providing some latitude to cater for existing on-street parking associated with existing park uses.
- 5.6.7 The proposals provide safe and convenient access for cars and other traffic without compromising pedestrian safety or amenity. A Green Travel Plan is proposed that would monitor access by all modes and include measures to encourage alternatives to the car. This would be supported by the provision of cycle parking.
- 5.6.8 JMP presented the findings of the study to the Broomfield House Task Force; a copy of the summary issued at this meeting is included at Appendix H.