



traffic impact assessment

project application for lot 1 within the former sunbeam site at
charlotte street and harp street, clemton park

prepared on behalf of Parkview Sydney developments by TRAFFIX traffic & transport planners

ref: 08 088 Lot 1 PA report v2 october 2008



traffix

traffic & transport planners

level 2/55 mountain st
broadway nsw australia 2007
po box 697 broadway nsw 2007
t: (02) 9211 3352 f: (02) 9211 2740
e: enquiries@traffix.com.au
director graham pindar
acn: 065132961
abn: 66065132961



contents

1.	introduction	1
2.	location and site	2
3.	existing traffic conditions	3
3.1	road hierarchy	3
3.2	overview of existing traffic conditions	4
3.3	existing public transport services	5
3.4	existing intersection performances	5
4.	description of lot 1 project application	7
5.	parking requirements	8
5.1	parking rates and provision	8
5.2	disabled parking	9
5.3	servicing	10
6.	traffic impacts	11
6.1	traffic generation	11
6.2	Demolition traffic impacts	12
6.3	Construction Traffic Impacts	12
7.	access & internal design aspects	13
7.1	site access arrangements	13
7.2	internal design	13
8.	conclusions	15

Appendix 1: Photographic Record

Appendix 2: Plan Extracts

Appendix 3: Swept Path Analysis



1. introduction

Traffix has been commissioned by Parkview Sydney Developments to undertake a traffic impact assessment of a Project Application for Lot 1 within the former Sunbeam site in Charlotte Street at Clemton Park. The report should be read in the context of the Environmental Assessment Report for the Concept Plan Application that was prepared by Planning Workshop Australia, which was a separate application made under Part 3A of the Environmental Planning and Assessment Act, 1979. That report included a comprehensive traffic impact assessment report prepared by Traffix, which forms the context for this Project Application and which dealt with the overall cumulative traffic impacts associated with the total site.

This report should also be read in conjunction with the overall Environmental Assessment Report for this Lot 1 Project Application, of which this report forms a part. The Environmental Assessment Report has been prepared by Planning Workshop Australia and deals with all relevant matters as required under the Environmental Planning and Assessment Act, 1979.

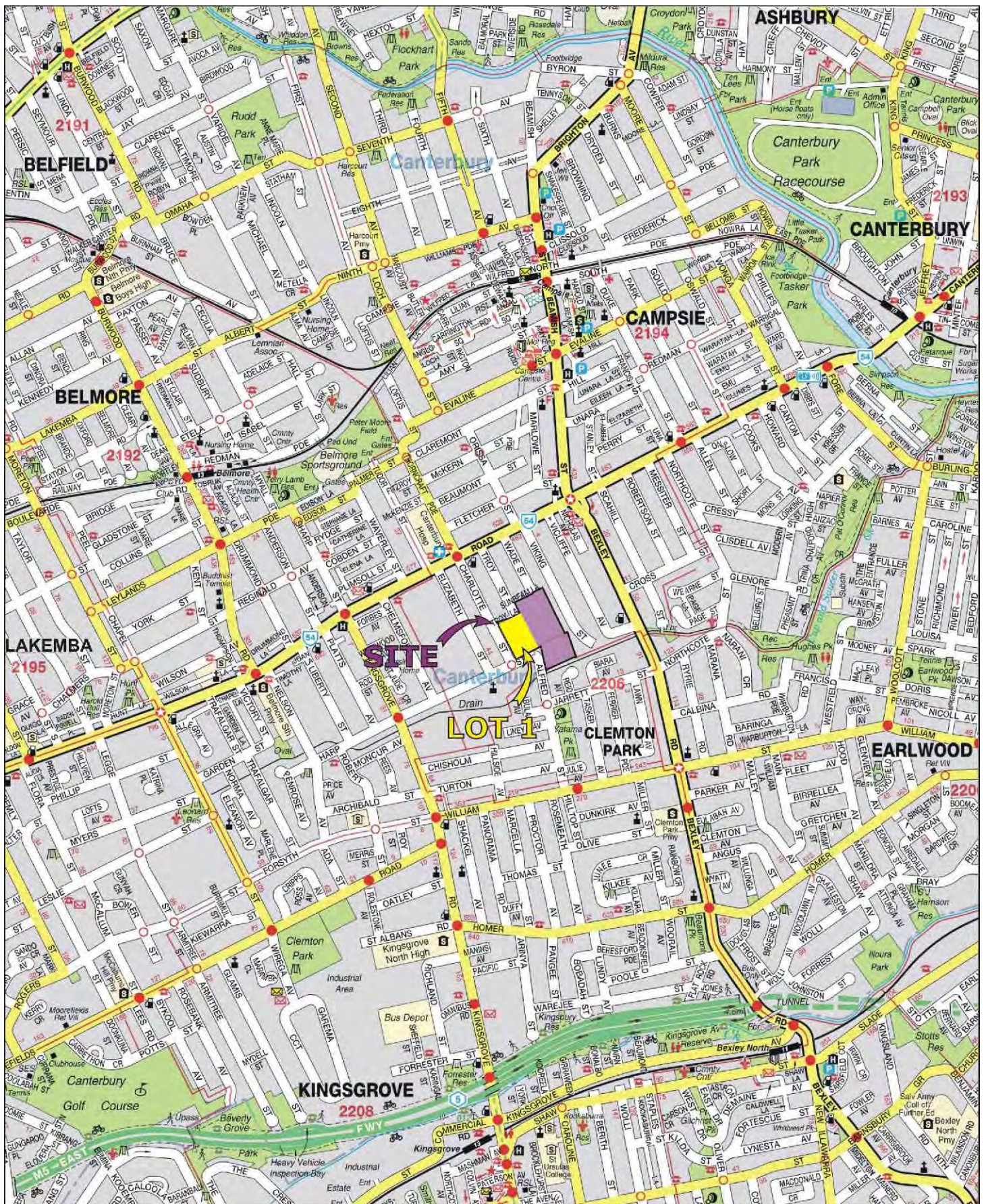
This report documents the findings of our investigations and relates to the development of 26,343m² of lettable bulky goods retail area and other uses on Lot 1.



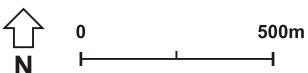
2. location and site

The overall Clemton Park site is situated at the former Sunbeam factory in Harp Street, about 300 metres south of Canterbury Road and about 100 metres west of Bexley Road, at Clemton Park. It lies within an established industrial precinct and is about 1.2 kilometres south of the existing Campsie town centre. In a more local context, it has primary road frontages to Harp Street and Charlotte Street, while secondary accesses are also available at the southern end of Troy Street and Wade Street. These frontages have all been used historically for vehicular access to the site and continue to be used as significant site accesses. The overall site is shown in **figures 1 and 2**.

Lot 1 is bounded by Charlotte Street, Harp Street, New Alfred Street and New Troy Street. This lot has a rectangular configuration and currently comprises a large industrial building. A Photographic Record presented in **appendix 1**, which provides an appreciation of the general character of roads and other key attributes in proximity to the site.



Source: UBD 2008



project application: mixed use development
60 charlotte street, clemton park

figure 1
location



prepared on behalf of parkview sydney developments
by traffic traffic & transport planners



cadastre plan

0 200m

aerial photograph: dated January 2007

0 100m

project application: mixed use development
60 charlotte street, clemton park

figure 2
site

prepared on behalf of parkview sydney developments
by **traffix** traffic & transport planners





3. existing traffic conditions

3.1 road hierarchy

The surrounding road network and hierarchy is presented and discussed in detail in the Traffic Assessment Report prepared in support of the Concept Plan Application for the overall site. The road system comprises:

- | | | |
|---|-----------------|--|
| □ | Canterbury Road | is an important RTA State Road (MR 167) carrying some 43,000 vehicles per day in the vicinity of the site and serving as a east-west link between the Sydney CBD and the western suburbs; |
| □ | M5 Motorway | is an RTA State Road (MR 6005) and is one of Sydney's major links from the CBD to the south western suburbs. It lies to the south of the site and is accessed via Canterbury Road and King Georges Road |
| □ | Bexley Road | is an RTA State Road (MR 169) and is a continuation of Beamish Street to the south of Canterbury Road. It is also a major north south link between Canterbury Road and the M5 motorway. It carries approximately 23,000 vpd in the vicinity of the site; |
| □ | Beamish Street: | is an RTA Regional Road (SR 2014) which acts as a north south link from Georges River Road in the north to Canterbury Road in the south and carries about 22,000 vpd in the vicinity of the site. |
| □ | Kingsgrove Road | is a local collector road that connects Canterbury Road in the north with Stoney Creek Road in the south and carries about 12,000 vpd. |
| □ | Harp Street | is a local industrial collector road that connects Kingsgrove Road to the west of the site with William Street to the south of the site, via Albert Street. It runs |



generally east-west along the southern boundary of the site and carries about 7,000 vpd.

- Charlotte Street is a local collector road that connects Canterbury Road to the north of the site with Harp Street to the south of the site. It runs north-south along the western site boundary and carries about 5,000 vpd.

3.2 overview of existing traffic conditions

Canterbury Road is constructed with a 12.8 metre wide carriageway, with 3.6 metre wide footpaths along both sides. It carries two through traffic lanes in each direction, with 'No Parking' and AM/PM 'Clearways' signposted on both sides.

Bexley Road and Beamish Street together form a four-way junction with Canterbury Road and this is a major intersection in the locality which is under traffic signal control. West of this intersection, Charlotte Street and Thorncraft Parade together form a four way junction with Canterbury Road and this intersection is also under traffic signal control. However, there is a right turn prohibition at this intersection for the movement from Canterbury Road into Charlotte Street (west to south). Accordingly, right turns from Canterbury Road occur at Kingsgrove Road, which is also under traffic signal control.

Harp Street forms a four way signal-controlled junction with Kingsgrove Road to the west of the site. A roundabout is provided at the intersection of Charlotte Street with Harp Street adjacent to the site, which provides single lane circulating traffic flow. To the east of this roundabout, Harp Street undertakes a sharp right bend into Alfred Street. This bend incorporates a short length of concrete median to provide channelisation of traffic.



Further to the south along Alfred Street, local access routes are available onto Bexley Road via Jarrett Street and William Street. Jarrett Street is not a favourable route for traffic exiting the subject site due to the fact that all traffic must turn left from Jarrett Street into Bexley Road.

Lot 1 is located within a new block that will be created by the construction of New Troy Street (western boundary) and New Alfred Street (northern boundary), as discussed in further detail in the Concept Plan Application and as is evident from figure 2.

3.3 existing public transport services

The site benefits from good access to bus services as discussed in the Concept Plan Application. These services are important for both the journey-to-work as well as shopping and other trips, with direct services provided to the Sydney CBD, Rockdale, Bondi Junction, Bankstown, Drummoyne and Five Dock.

3.4 existing intersection performances

The traffic assessment report prepared for the Concept Application was based on extensive surveys during the AM and PM peak periods. These surveys confirmed that no change has occurred since the previous 2004 and 2006 traffic studies undertaken for this site, with no effective growth on the local road system. This is also supported by a review of traffic conditions at the RTA's nearby permanent count station (Station 24.213) which shows that the annual average daily traffic (AADT) has reduced from 47,778 on 1999 to 42,056 in 2005 (which is in fact less than traffic volumes that occurred in 1993) and this is largely attributable to the influence of the M5 Motorway. The key intersections in the locality that are of interest and were surveyed and assessed are as follows:

- The intersection of Charlotte Street with Canterbury Road,
- The intersection of Bexley Road with Canterbury Road;
- The intersection of Bexley Road with Jarrett Street;



- The intersection of Jarrett Street with Alfred Street;
- The intersection of Harp Street with Charlotte Street; and
- The intersection of Harp Street with Kingsgrove Road.

The surveys and the analysis undertaken showed that all of the above intersections operate generally satisfactorily during both the AM and PM peak periods. The previous report also assessed future conditions to compare the relative change in the performance parameters as a result of the overall development of all lots, including Lot 1. This is discussed further in the following sections.



4. description of lot 1 project application

A detailed description of the Project Application for Lot 1 is provided in the Environmental Assessment report prepared by Project Planning Australia, of which this report forms a part. In summary, the Project Application for which approval is now sought comprises the following components:

- A 'normal' bulky goods retail use with a gross lettable area of 14,846m²;
- A 'trade' bulky goods use with a gross lettable area of 3,165m², which specialises in services to the trades industries;
- A gymnasium with a gross lettable floor area of 1,244m²;
- Specialty retail with a gross lettable area of 1,204m²;
- A commercial floor area of 5,948m²;
- A two level basement car park with capacity for 701 spaces;
- Provision of multiple car park accesses to achieve an efficient distribution of traffic onto the newly-created road system;
- Provision of a dedicated loading dock that will accommodate all classes of trucks up to and including a 19 metre articulated truck.

The parking and traffic impacts arising from the Project Application are discussed in the following sections. Reference should be made to the plans submitted separately to the Department of Planning, prepared by The Buchan Group, some of which are presented at a reduced scale in **appendix 2** for ease of reference.



5. parking requirements

5.1 parking rates and provision

The site is subject to the controls of Canterbury Council's Parking DCP No. 20 (Car Parking), although regard needs also to be given to the requirements of the RTA's Guideline as well as other survey-based assessments where these are of assistance. Specifically, the Director General's requirements seek to reduce parking as far as possible while promoting other (non-car) travel modes. The overall approach is considered in the Concept Plan Application. The required parking levels for each land use component within Lot 1 are considered separately below.

Bulky Goods Retail

There is a total of 18,011m² of bulky goods retail lettable floor area within the site, which includes 3,165m² of trade retail area. Council's DCP does not provide a rate for this use but rather requires an assessment based approach. Adoption of a rate of 2.4 spaces/100m² is embodied in the Concept Plan, resulting in a need for 432 spaces for this component.

Specialty Retail and Other Shops

The specialty retail within Lot 1 comprises a floor area of 1,250m². It is proposed that 62 spaces be provided within Lot 1, which is generally in accordance with Council's 'nominal' rate of 1 space/22m² floor area. The slight over-provision of 5 spaces will compensate for a slightly reduced rate for this use in the subsequent Lot 2 Project, to achieve an average rate of 1 space/34m² for this use across the entire site, which acknowledged the interaction between lots.

Commercial

Council's DCP requires 1 space/40m² which is the same as the RTA's requirement. Adoption of this rate is considered appropriate to ensure that on-street parking does not occur, which would impact on the amenity of the locality, notably existing residents. With 5,948m² of commercial floor area, a need for 149 spaces results and in response, 147 are proposed.



➤ Gymnasium

The gymnasium has an area of 1,253. Adoption of a rate of 4.8 spaces/100m² has been adopted in the Concept Plan Application, which is the lower end of the range in the RTA's Guideline. This results in a need for about 60 spaces and this is recommended for adoption. This approach recognises the fact that the gymnasium will draw some of its patronage from local residents and employees; as well as the fact that there is an ability to share the retail parking which does not generally peak at the same time. The approach taken is also in accordance with the objectives of the Council's DCP and the Director General's requirements.

➤ Combined Parking

Based on the above, the development requires a total of 701 spaces and these are provided, with:

➤	432 spaces	Bulky Goods
➤	62 spaces	Specialty Retail
➤	147 spaces	Commercial
➤	60 spaces	Gymnasium

5.2 disabled parking

A total of 13 disabled spaces are provided which represents 2% of the overall provision and this complies with AS 2890.1. These spaces are provided adjacent to the lifts.



5.3 servicing

The development incorporates a dedicated loading dock with capacity for 10 trucks, including three 19 metre long articulated truck spaces, three 12.5m HRV truck spaces, and 4 8.8m MRV truck spaces. This level of provision is considered very satisfactory.

The dock is accessed via Charlotte Street and is therefore physically separated from all light traffic. In addition, forward entry and exit movements are available to/from the driveway.



6. traffic impacts

6.1 traffic generation

The Lot 1 development is predicted to generate trips as shown in table 1, based on the trip rates discussed in the Concept Plan Application.

table 1: adopted trip rates and traffic generation for lot 1 project application

Use	GFA or NFA (m ²)	Weekday AM Peak		Weekday PM Peak		Saturday AM Peak	
		Rate (Trips/100m ²)	Trips (veh/hr)	Rate (Trips/100m ²)	Trips (veh/hr)	Rate (Trips/100m ²)	Trips (veh/hr)
Lot 1							
Bulky Retail	14,846	0.63	92	2.25	334	3.60	534
Gym	1,253	4.05	50	4.05	50	4.05	50
Trade Retail	3,165	0.52	16	0.94	30	0.94	30
Specialty Retail	1,251	0.63	8	2.25	28	3.60	46
Commercial	5,948	1.8	108	1.8	108	nil	Nil
TOTAL			274		550		660

It can be seen from table 1 that the development will result in comparable traffic volumes during the weekday AM and PM peak periods as those that were associated with the previous use of the site by Sunbeam, with 2,500 staff and up to 600 veh/hr. In addition, the trips shown do not take account of any discount for the current traffic levels within the site associated with several tenancies. Finally, the volumes are only about 50% of future traffic volumes that arise from the overall site under the Concept Plan Application.

Accordingly, assuming that the road system and other intersection improvements outlined in the Concept Plan traffic impact assessment are implemented, these volumes can be readily accommodated. The cumulative impacts associated with the overall site, including Lot 1, have been assessed in the Concept Plan application and are acceptable.



6.2 Demolition traffic impacts

It is anticipated that a detailed demolition management plan, incorporating a demolition construction traffic management plan, will be prepared following approval and this is anticipated as a condition on any consent that may be issued. It is expected that traffic activity will be focussed on the new 'internal' road network (New Troy Street and New Alfred Street), with limited reliance on Charlotte Street and Harp Street.

6.3 Construction Traffic Impacts

It is anticipated that a detailed construction traffic management plan will be prepared in response to a condition of consent. It is proposed that construction workers park within the basement when constructed, to minimise on-street parking.



7. access & internal design aspects

7.1 site access arrangements

The development will make reliance on the developed road system as shown on the submitted Concept Plan documentation. Lot 1 will be accessed via three frontages, including Charlotte Street, Harp Street and New Troy Street.

The main vehicular access is onto Harp Street, via a combined entry and exit driveway. This will require a right turn storage bay to be linemarked within Harp Street to facilitate the right turn entry movement, with passing using the kerbside lane. This has implications for the existing bike lane and an alternative arrangement may be considered, with only left-turn entry and exit movements permitted at this driveway. This should be seen in the context where exits will also be available onto New Troy Street, via a ramp connecting to Basement Level 1. Vehicles can turn left or right on exit at New Troy Street to provide a more efficient traffic distribution.

Finally, the loading dock is provided with a separate driveway onto Charlotte Street, between New Troy Street and Harp Street.

Sight distances at all driveways are excellent and in addition, all driveways incorporate visual splays in accordance with AS 2890.1 and AS 2890.2.

7.2 internal design

The ramp gradients and widths comply fully with AS 2890.1 and the ramp access and internal manoeuvrability for critical spaces is shown in **appendix 3**. Parking spaces are a minimum of 2.6 metres wide and 5.4metres long with 6000mm wide aisles also in accordance with AS 2890.1.



Disabled parking spaces are 3.2 metres wide and 5.4 metres long, with a clear head height of 2300mm in all areas traversed and 2500mm within the spaces.

In summary, the internal design of the basement car park is acceptable and will provide a good standard of safety and efficiency.



8. conclusions

The following matters are noteworthy:

- The proposed Project Application is consistent with the principles and level of intensity for Lot 1 as foreshadowed in the Preliminary Environmental Assessment report;
- Traffic impacts have been assessed on the basis of the plans provided in appendix b and the land use components discussed in this report. The resulting traffic impacts can be accommodated by the new road system, which provides a superior level of accessibility and traffic distribution than occurs presently;
- The cumulative impacts of traffic associated with Lot 1 as well as all other development within the Concept Plan area has been separately assessed in the Concept Plan application. This analysis has demonstrated that the traffic can be accommodated, subject to the improvements identified and the development of an internal public road network. This has included conditions on weekdays, Saturdays and Sundays.
- The overall parking provision for Lot 1 is generally in accordance with Council's DCP, with 701 spaces. This takes account of the fact that some uses will be patronised by residents and employees (who will walk), as well as the ability to share parking due to off-set times of peak demands;
- The access and internal design arrangements comply with the requirements of AS 2890.1 as well as Council's requirements;

It is therefore concluded that the proposed development on Lot 1 is supportable on traffic planning grounds and will operate satisfactorily.



appendix 1: photographic record