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Proposed Community Care Centre, Brown Edge Road, Buxton

Transport Assessment – Revision B For



12461/TA
Original

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1 Introduction

1.1 Background

BSP Consulting have been appointed by Keepmoat, to prepare a Transport Assessment (TA) for a proposed Community Care Centre on Brown Edge Road, Buxton.

The site comprises a former playing field owned by Derbyshire County Council (DCC), and current proposals are for the site to be developed a 69-bed specialist Community Care Centre. This will comprise of 53 extra care apartments and a 16 bed dementia unit. It is proposed that a total of 47 car parking spaces will be provided on the site. The proposed site layout is shown indicatively in Appendix A.

This TA report has been prepared to inform Highways Development Control Officers at DCC with respect to all highways, traffic and transportation matters associated with the redevelopment proposals. This document is issued as revision B, to reflect alterations to the development proposals and staffing levels, and to incorporate comments from DCC highways, further to the original submission of the TA.

The TA has been prepared in accordance with DfT's best practice document *Guidance on Transport Assessment*, and the scope of the TA is described below.

1.2 Scope of Transport Assessment

Following this introduction, the TA will include the following Chapters:

- Chapter 2 describes the baseline situation with reference to the development site's location, the highway network and sustainable travel facilities available in its proximity.
- Chapter 3 details the development proposals including arrangements for site access, car and cycle parking provision, and servicing arrangements.
- Chapter 4 calculates the vehicle trip generation associated with the proposed development and quantifies the impact of the proposals on the local highway network.
- Chapter 5 assesses highway safety and provides details of the accident data in the vicinity of the site for a recent 5 year period.
- Chapter 6 summarises and concludes the TA.

2 Existing Conditions

2.1 Site Location

The site is located on the northern side of Buxton, Derbyshire, and is bordered by Brown Edge Road to the east, residential developments to the south and open fields to the west and north. The site location is shown in Figure 1, and can be seen in greater detail in Figure 2 below.

Figure 1: Site Location Plan

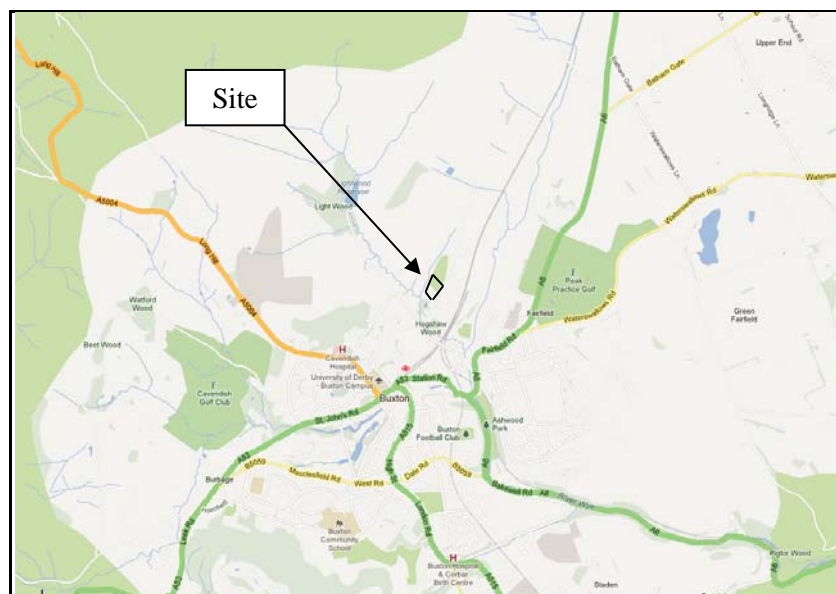


Figure 2: Detailed Site Location Plan



2.2 Sustainable Transport Facilities

Paragraph 35 of the National Planning Policy Framework (NPPF) states that “developments should be located and designed where practical to give priority to pedestrian and cycle movements, and have access to high quality public transport facilities”. Accessibility to the site by sustainable modes of transport is discussed below.

2.2.1 Walking

National planning policy was amended on 27th March 2012. However, whilst PPG13 on Transport was cancelled, the Good Practice Guide remains extant. “PPG13: A Guide to Better Practice” stated that “motorised modes are rarely used for trips of around half a mile (0.8 km) or less and the former PPG13 stated that “walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres”.

The 0.8km threshold distance relates to the typical distance that people are prepared to walk before reverting to motorised modes of travel and the 2.0km threshold distance is that below which a sustainable approach to transport planning would seek to replace car trips for walking trips.

Figure 3 below shows the areas within a 0.8km walking distance of the site. It can be seen that much of this area is rural, however there are some residential communities to the south of the site. Buxton railway station, and a number of bus stops, are located within this walking distance. These facilities are discussed in further detail in sections 2.2.3 and 2.2.4 below.

Figure 4 shows the areas within a 2.0km walking distance of the site, which include the whole of Buxton and Fairfield, and the associated leisure, retail and education facilities. The potential therefore exists for trips to and from the site to be made by walking.

Figure 3: Indicative 0.8km Walking Routes from the Site

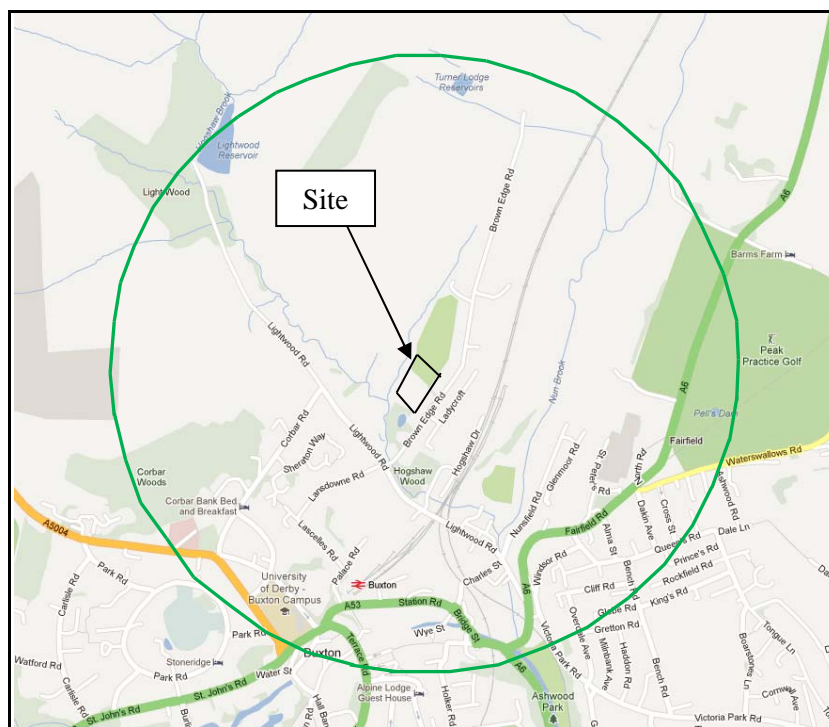
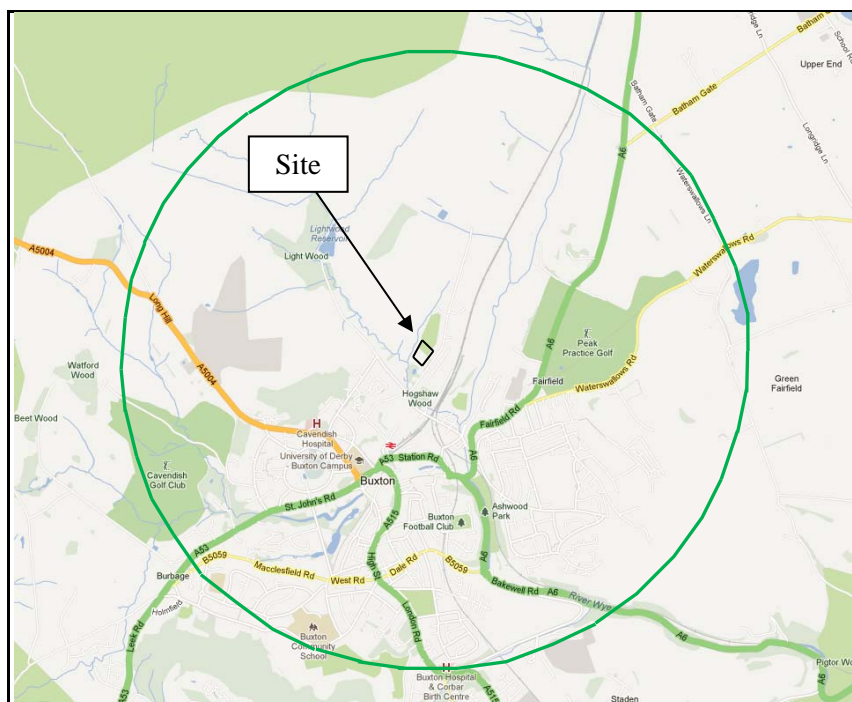


Figure 4: Indicative 2.0km Walking Routes from the Site



The existing pedestrian infrastructure will encourage walking trips to and from the site. There are wide footways on both sides of Brown Edge Road, as shown in Photograph 1 below, and footways on all of the surrounding roads which would help pedestrians to reach all of the areas within a reasonable walking distance.

Photograph 1: Footways on Brown Edge Road



Pedestrian access to the site from Brown Edge Road is proposed to be via a gated access, for pedestrian use only, approximately 20m south of the vehicular access to the site. This arrangement is shown indicatively in Appendix A.

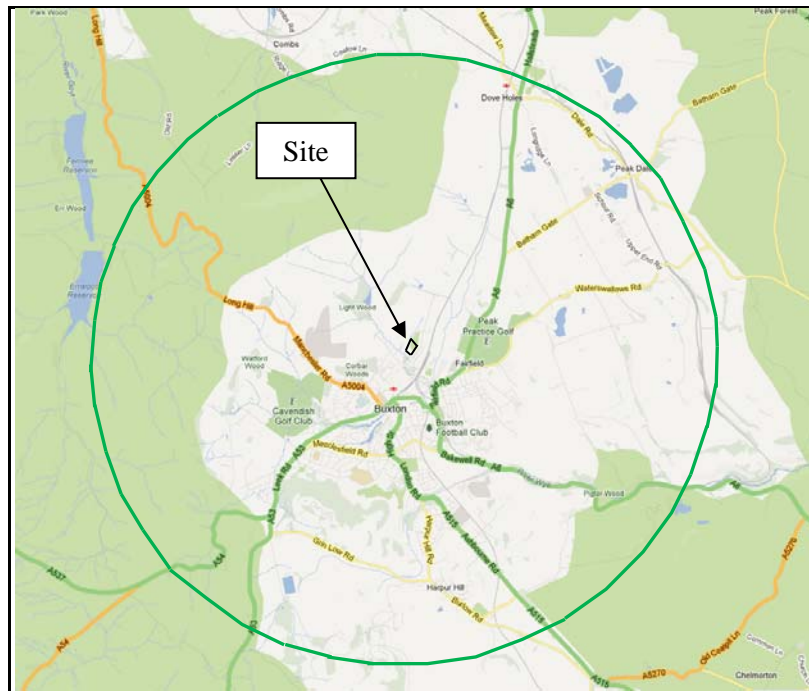
2.2.2 Cycling

Former PPG13 noted that “cycling also has potential to substitute for short car trips, particularly those under 5.0km and to form part of a longer journey by public transport”. The proximity of the site to urban areas in and around Buxton would therefore allow cycle trips to be made from within this recommended cycling distance.

It is expected that a significant number of trips to and from the site could be made by cycling, as this is a very cheap and fast option for accessing amenities at short to medium distances. There are no designated cycle facilities within the vicinity of the site. However the surrounding roads are lightly

trafficked and cyclists would be able to travel on the roads to reach the site. Figure 5 below shows the area within a 5.0km cycling distance of the site.

Figure 5: Indicative 5.0km Cycling Routes from the Site



Cycle parking at the proposed development has been planned in accordance with DCC cycle parking standards. This is discussed in more detail in the ‘Development Proposals’ chapter of this TA.

2.2.3 Bus Services

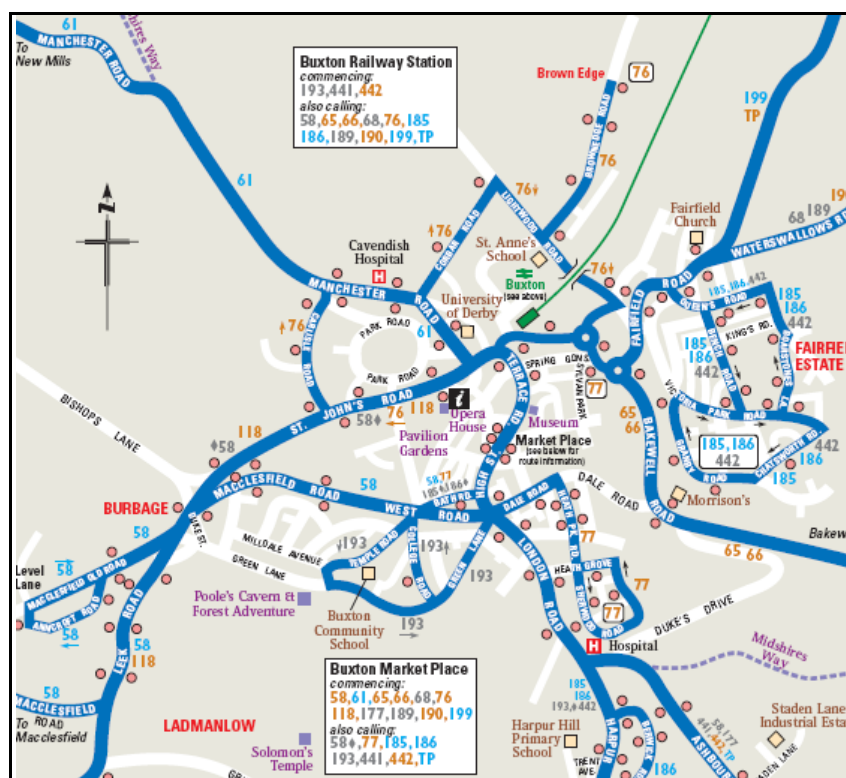
The nearest bus stops to the site are located within a short walking distance of the site. For northbound travel, there is a bus stop on Brown Edge Road directly outside the site, and for southbound travel, there is a bus stop on Brown Edge Road close to the junction with Lightwood Road, approximately 300m from the site access. The bus stops are shown in photograph 2 below. It would not be expected that the proposed development would create sufficient extra demand for bus services to warrant improvements to the existing bus stops. Furthermore, provision of shelters or benches at these locations would be detrimental to pedestrians using the footways, and as such bus stop improvements are not considered appropriate.

Photograph 2: Bus Stops in Vicinity of Site



The bus services in operation in the vicinity of the site are shown on Figure 6 below. Figure 6 shows that the bus stops on Brown Edge Road are served by service number 76.

Figure 6: Bus Services in Vicinity of Site



This service runs on a two-hourly basis throughout the day between 09:14 and 15:14, from Monday to Saturday, as shown in the bus timetable in Figure 7 below. Service 76 is a local service connecting with Buxton Market Place and various other destinations within Buxton.

Figure 7: Timetable for Bus Service Number 76

76 Buxton Town Service	
Mondays to Saturdays	
Notes:	
Buxton, Market Place [C]	0900 1100 1300 1500
St John's Road, Cartisle Road	0904 1104 1304 1504
Corbar Road, Marlborough Road	0907 1107 1307 1507
Brownedge	0912 1112 1312 1512
Lightwood Road, Brownedge Rd	0914 1114 1314 1514
Buxton, Sylvan Park arr	0917 1117 1317 1517
Buxton, Sylvan Park dep	0925* 1125* 1325* 1525*
Buxton, Market Place	0928* 1128* 1328* 1528*
Notes:	
* Bus continues to Buxton Market Place & Macclesfield as service 58.	
Sorry no service on Sundays or Bank Holidays.	

Details of other bus services in operation within Buxton are shown in Figure 6. Many bus services are available from Buxton railway station, which is located approximately 1km south of the site. These bus services link Buxton with Nottingham, Derby, Chesterfield, Sheffield, Stockport and numerous other destinations.

2.2.4 Railway Services

The site is well located for access to railway services, with Buxton railway station located approximately 1km from the site. The main railway service available from Buxton is an hourly train service between Buxton and Manchester Piccadilly, which takes approximately one hour. The service frequency is enhanced to approximately half-hourly in the morning and evening peak periods.

2.2.5 Summary of Sustainable Transport Facilities

In light of the above, the site is considered to be in a sustainable location. The site is easily accessible by pedestrian travel due to its proximity to Buxton, the existing pedestrian infrastructure and the proposed access arrangements. Although there are no designated cycle lanes in the vicinity of the site, cyclists would be able to travel to the site on the roads surrounding the site, from a number of areas within a reasonable cycling distance.

There is a bus service available on Brown Edge Road, although this is not a frequent service and it does not operate during the morning or evening peak hours. There are, however, a number of other bus services within 1km of the site, particularly those available from Buxton railway station, which provide a regular service to a wide range of destinations. This is considered to be a reasonable walking distance and it is expected that people would be prepared to walk this distance to use the services available. It is expected that a number of trips to and from the site could be made using the train services available from Buxton railway station.

In light of the above, it is considered that the existing sustainable transport facilities will serve the proposed development sufficiently.

3 Development Proposals

3.1 Development Schedule

The site comprises a private playing field owned by DCC, and current proposals are for the site to be developed as a 69-bed specialist Community Care Centre. This will comprise of 53 extra care apartments and a 16 bed dementia unit. It is proposed that a total of 47 car parking spaces will be provided on the site, which is discussed further in section 3.2 below. Vehicular access to the site will be via a simple priority junction with Brown Edge Road. The proposed site layout and access arrangements are shown indicatively in Appendix A.

3.2 Car Parking Provision

Parking provision for the proposed development has been planned in accordance with the standards shown in The 6C's Design Guide. This document deals with highways and transportation infrastructure for new developments in areas for which Derby City Council, Derbyshire County Council, Leicester City Council, Leicestershire County Council and Nottinghamshire County Council are the highway authorities. For use class C2 – nursing homes, The 6C's Design Guide has adopted standards previously used by Leicestershire County Council, "Highway Requirements Part 4", which states that a nursing home should provide 'one space for three bedrooms plus one space for each staff member on site'. Although the extra care scheme will not be a registered nursing home, use class C2 provides the most appropriate standards for car parking at this development. Details regarding the number of staff at the site, for the extra care unit and dementia unit, are shown in Table 1 below.

Table 1 – Summary of Staff Working Patterns

Dementia Unit		Extra Care Unit	
Role	Hours	Role	Hours
1 manager	9am – 5pm	1 manager	9am – 5pm
3 care staff	7am – 2pm	1 shop operator	9am – 5pm
2 care staff	2pm – 10pm	1 hairdresser	9am – 5pm
2 care staff	10pm – 2am	5 care staff	Shifts, max. 3 at a time
2 domestic staff	7am – 2pm	3 catering staff	8am – 6pm
2 day service staff	9am – 4pm	1 cleaning staff	7.30am – 3pm
2 domiciliary staff	7am – 10pm		
2 domiciliary staff	10pm – 7am		

Table 1 shows that a maximum of 20 staff would be on site at any one time, requiring 20 car parking spaces. If 1 car parking space is provided per 3 bedrooms, this would equate to 23 car parking spaces, resulting in a total car parking provision of 43 spaces. Additionally, extra car parking spaces will be needed for Health Staff who will visit the site on a regular basis. A total car parking provision of 47 car parking spaces is therefore considered appropriate, and the proposed car parking arrangement has been designed in accordance with this, as shown on the site layout plan in Appendix A.

The developer has provided details of car parking provision at similar extra care units, which is included for reference in Appendix C. The data suggests that the proposed level of car parking at this site would be appropriate. The Winton Court extra care scheme, which consists of 40 apartments, has a car parking provision of 18 spaces. A 7 day car parking survey was carried out in July 2008, and 18 spaces was determined to be adequate. At 1 time during the 7 day survey, 19 vehicles were recorded on site. The 47 spaces proposed for this 69 bed facility is therefore considered suitable.

The 6C's design guide sets out the minimum number of disabled spaces to be provided, when a car park is used by employees and visitors. It is stated that *'an individual bay should be provided for each disabled employee, plus two bays or 5% of total parking spaces whichever is greater'*. It is not known at present how many disabled employees there would be at the premises but the minimum provision of 5% will be provided. This would equate to 3 disabled spaces, which are shown in Appendix A.

3.3 Cycle Parking Provision

It is anticipated that a number of trips to and from the site will be made by cycling. The 6Cs guidance does not specify a minimum level of cycle provision for care homes, but for other uses it is stated that the cycle parking provision should be judged on a site-by-site basis. For this site it would be expected that cycle parking would be of benefit to staff and visitors, and provision to park the cycles of 10% of the maximum number of staff and visitors at the site at any one time would be considered appropriate, which would equate to approximately 6 cycle parking spaces. It is therefore recommended that 3 'sheffield stands' will be provided, positioned in a secure, well-lit and sheltered location.

3.4 Servicing Arrangements

The proposed site layout in Appendix A shows that a 'service yard' is proposed within the site, which would allow service vehicles to enter and depart the site in a forward gear. The proposed road layout would allow refuse collection vehicles to access the service yard adjacent to the bin store and then leave the site in a forward gear. A vehicle tracking drawing showing a refuse vehicle completing this movement is shown in Appendix D.

4 Traffic Impact Assessment

This section of the TA aims to quantify the number of vehicle trips that the current proposals would generate. As the site is currently unoccupied, any trips generated by the proposed site use would be an increase in traffic. The TRICS database has been used to estimate the number of trips generated.

It is proposed that the site will be developed as a 69-bed specialist Community Care Centre. The TRICS category 'Health – Care Home' has been used to determine the number of vehicle trips generated. The traffic generated by the proposed site use has been estimated for the peak hours of the road network (08:00 – 09:00 and 17:00 – 18:00).

Survey sites in Scotland and Ireland were considered unsuitable and were filtered out of the TRICS database. The remaining sites were of similar size to the proposed development and therefore considered to provide an accurate representation of trip rates for the proposed use at the site location. Full printouts of the TRICS data can be viewed in Appendix B. The trip rates and associated trip generation for the proposed site use are shown in Table 2 below. Average trip rates have been used.

Table 2: Trip Rates and Trip Generation for Proposed Care Home Use

Health – Care Home	08:00 – 09:00			17:00 – 18:00		
	ARR.	DEP.	TOT.	ARR.	DEP.	TOT.
Trip Rate per resident	0.081	0.069	0.150	0.045	0.069	0.114
Trip Generation (69 residents)	5	5	10	3	5	8

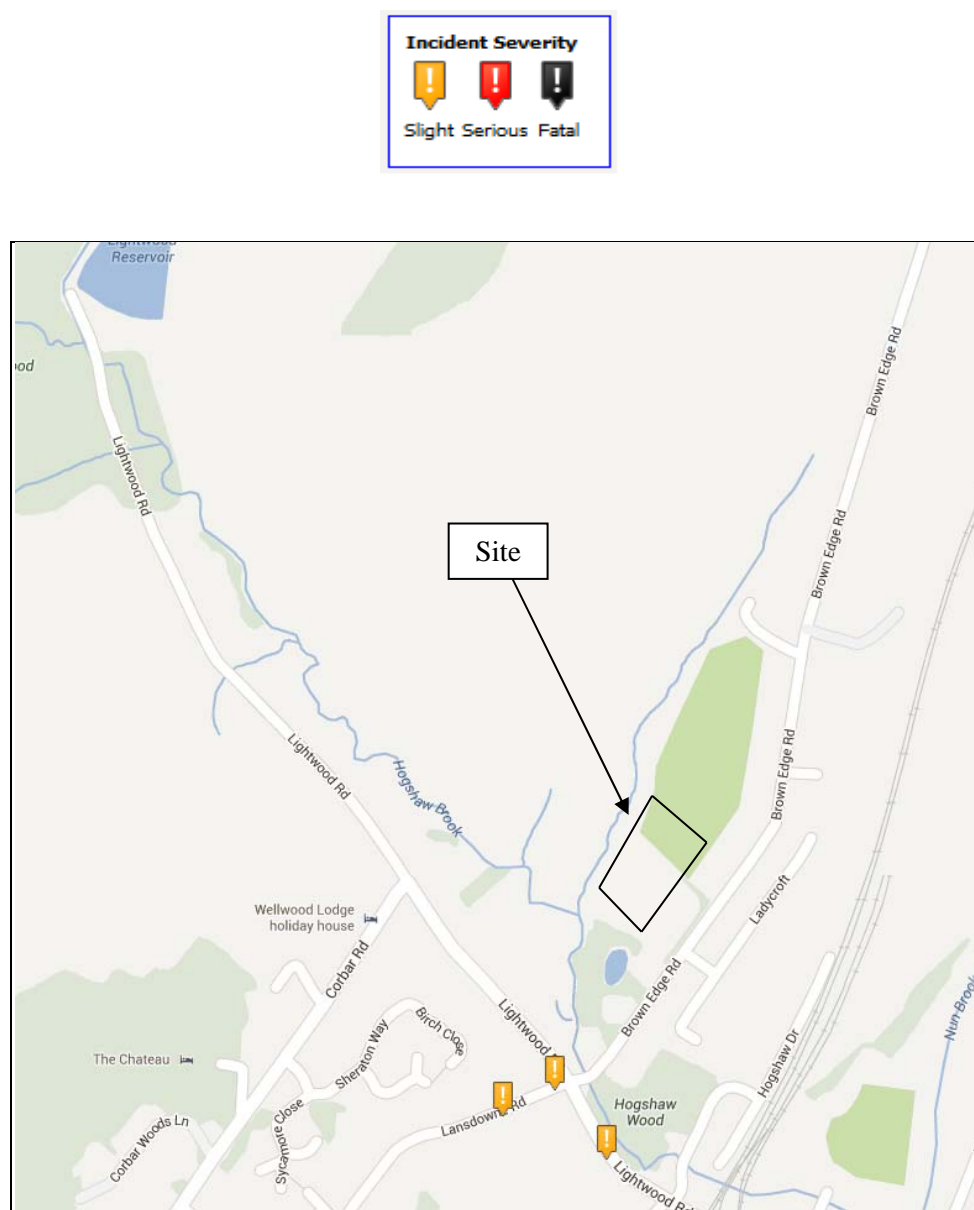
Table 2 shows that the current proposals would be expected to generate approximately 10 trips in the AM peak hour and 8 trips in the PM peak hour. Given the sustainable nature of the site, particularly the ease of access to bus services and the potential to walk to local destinations, these figures are considered to provide a robust assessment of the likely traffic generation.

The DfT document, *Guidance on Transport Assessments*, states that standalone capacity assessments will be necessary if a development 'generates 30 or more 2-way vehicular movements' in the AM or PM peak hour. The traffic generated by this proposed development is less than this threshold, and as a result, mitigation measures are not considered necessary. General observations of the surrounding highway network suggest that highway capacity is not currently an issue for concern.

5 Highway Safety Assessment

An investigation has been carried out into highway safety in the vicinity of the proposed development. Figure 8 below shows the accidents that have occurred during the 5 year period from 2007 to 2011. There have been a total of 3 accidents in the study area shown, none of which occurred on Brown Edge Road.

Figure 8: Accidents in the 5 year period (2007 – 2011)



The 3 accidents shown on Figure 8 are summarised in Table 3 below.

Table 3: Summary of Accidents in 5 year period (2007 – 2011)

Accident No.	Severity	Date	Details
1	Slight	31 st March 2008	1 vehicle and 1 casualty
2	Slight	2 nd January 2010	1 vehicle and 1 casualty
3	Slight	27 th September 2010	1 vehicle and 1 casualty

Table 3 shows that the 3 accidents recorded in the 5 year study period were all classed as slight. The number of accidents that have occurred is not considered to be a high number during a 5 year period, and the categories of the accidents does not indicate that there is cause for concern regarding highway safety in the vicinity of the site.

6 Conclusions

BSP Consulting were appointed by Keepmoat, to prepare a Transport Assessment (TA) for a proposed Community Care Centre on Brown Edge Road, Buxton.

The site comprises a former playing field owned by DCC, and current proposals are for the site to be developed as a 69-bed specialist Community Care Centre. This will comprise of 53 extra care apartments and an 16 bed dementia unit.

The site is easily accessible by pedestrian travel, and although there are no designated cycle lanes in the vicinity of the site, cyclists would be able to travel to the site on the roads surrounding the site. The site is accessible by bus or train, and as such it is considered that the existing sustainable transport facilities will serve the proposed development sufficiently.

Parking provision has been designed in accordance with The 6C's design guidance. 47 car parking spaces and 6 cycle parking spaces are proposed on the site.

An accident analysis has been carried out for the area surrounding the site. During a 5 year study period, there were a low number of accidents, all of which were classed as being slight.

An assessment of the likely number of trips generated by the development has been undertaken. Trip generation estimates were determined using a selection of similar sites from the TRICS database. The findings indicated that the current proposals would be expected to generate approximately 10 trips in the AM peak hour and 8 trips in the PM peak hour. Given the sustainable nature of the site, particularly the ease of access to bus services and the potential to walk to local destinations, these figures are considered to provide a robust assessment of the likely traffic generation.

The DfT document, *Guidance on Transport Assessments*, states that standalone capacity assessments will be necessary if a development 'generates 30 or more 2-way vehicular movements' in the AM or PM peak hour. The traffic generated by this proposed development is less than this threshold, and as a result, mitigation measures are not considered necessary.

In light of the above, the proposed development is considered to be acceptable in highway terms.

Appendix A – Proposed Site Layout Plan