1484-01-TS01(Rev A)
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LAND OFF BATHAM GATE ROAD, PEAK DALE, DERBYSHIRE

PROPOSED RESIDENTIAL DEVELOPMENT (27 DWELLINGS)

TRANSPORT STATEMENT

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1.0 INTRODUCTION

1.1 This Transport Statement has been prepared by Axis on behalf of Mr Tim Bagshawe to consider highways and transport issues related to proposed residential development on land off Batham Gate Road, Peak Dale, Derbyshire. The scheme would comprise the comprehensive development of the site for up to 27 residential units and associated public open space and landscaping.

1.2 The report has been prepared to appraise the Local Planning Authority (High Peak Borough Council) and Local Highway Authority (Derbyshire County Council), of the highway demand / impact associated with the development proposals and to outline the design and nature of the site access arrangements. The appraisal also includes an assessment of the operating capacity of the immediate local highway network.

1.3 The report has been prepared to reflect guidance set out in March 2007 Department of Transport (DfT) document "Guidance on Transport Assessment". This guidance document identifies that a formal Transport Statement / Transport Assessment report is typically required to be prepared for new residential schemes of development size greater than 50 dwellings. The proposal scheme at Peak Dale represents a level of development well below this minimum threshold and therefore it could be argued that no formal highways assessment report is required under guidance. Given that the scheme would generate traffic movements and form a layout that would directly access a 40mph local distributor road route, however, it is considered that the production of a Transport Statement is appropriate in this case.

1.4 The scope and nature of this Transport Statement reflects the extent of matters which are understood to be of material interest to the Local Highway Authority, given the location and size of the development scheme and based on pre-application discussion with highways officers during Summer / Autumn 2014.

1.5 The core structure of the remainder of this Transport Statement is as follows:

- An audit of the existing characteristics of the immediate highway layout to the site, including observed peak hour traffic demand, highway safety matters and a review of site accessibility via alternative travel modes to the private car.

- A review of the key proposed development elements & proposed site access strategy.

- An assessment of the future traffic levels anticipated to be generated by the development scheme and the anticipated assignment of this traffic over the immediate local highway network.

- A review of the operating capacity of the proposed site access junction to Batham Gate Road and the suitability of the local network to accommodate the additional traffic volumes associated with the scheme.

- Summary & conclusions.

2.0 SITE LOCATION AND EXISTING NETWORK CONDITIONS

2.1 Site Location

2.1.1 The strategic location of the proposal site is illustrated in **Figure TS1** to this report. This plan identifies the location of the site in relation to the settlements of Peak Dale & Batham Gate and the proximity to the A6 and the town of Buxton.

2.1.2 Details of the layout of the immediate local highway network to the proposal site are illustrated in **Figure TS2** to this report, with photographs of key existing layout features illustrated in **Appendix TS1**.

2.2 Existing Site Conditions & Planning Status

Site Conditions

2.2.1 The proposal site is an irregular shaped land parcel, located within the settlement of Peak Dale and represents existing agricultural and pasture land. To the north, the site is bounded by the alignment of Batham Gate Road and rear gardens to frontage properties associated with this route, to the east by rear gardens to adjacent properties associated with Church Avenue and to the south and west by agricultural fields.

2.2.2 During initial pre-application discussions with the local highway authority, the applicant highlighted a localised depression in the site close to the alignment of the proposed development spine road. This feature has subsequently been investigated by site excavation and has been determined to be a small dis-used cess pit (circa 1.3m deep) likely to have originally served surrounding outbuildings (see results of the SI report included as **Appendix TS2** to this report). No unusual ground conditions associated with this depression feature were reported that could be expected to impact on the delivery of a new highway access or the potential formal adoption of such a route.

Site Planning Status

2.2.3 The proposal site is not allocated in the prevailing statutory development plan. The HPBC Local Plan Proposals Map (March 2005) identifies that the site is partly located within the open countryside (adjacent to the Built-Up Area Boundary of Peak Dale) and partly within the Built-Up Area Boundary.

2.2.4 HPBC is currently updating the development plan and has conducted a number of consultation sessions including a public consultation on the Preferred Options Development Plan Document (DPD) (published February 2013) between March and April 2013. As part of this document, the site was identified as a potential allocation site for housing or mixed use development. The DPD identified that the site could potentially deliver up to 25 dwellings within the early phase period of the emerging Local Plan, (i.e. during the years 2012 to 2018).

2.2.5 The draft Local Plan (including the proposal site as a allocation site for housing under Policy H3) was published on 23 April 2014 and subject to the formal representation period (legal compliance and soundness) which ran until 23rd June 2014. The formal draft Local Plan was subsequently submitted to the Secretary of State on 28th August 2014 and is programmed to move to the Examination in Public stage in early 2015.

2.3 Description of Surrounding Local Highway Network

Existing Vehicular Site Access Arrangements

2.3.1 The proposal site is currently served by a single vehicular connection point to the local adopted highway network. This access point is a gated, 'dropped kerb' agricultural field access point to Batham Gate Road, located to the northern boundary of the site.

2.3.2 It is anticipated that the main vehicle access to the proposed residential scheme would be taken from an access point along this northern development frontage to Batham Gate Road.

Local Network Connections

2.3.3 Batham Gate Road represents the main local distributor road route through the settlement of Peak Dale. The route is of a single carriageway layout, with local side road connections being of a simple 'give-way' T-junction design. In the immediate vicinity of the proposal site frontage, Batham Gate Road varies between 6.9m – 7.3m in width, with a segregated footway available to both sides. On the development side this footway varies in width, ranging from 2.6m to the north eastern corner of the site to 1.4m to the northwestern corner.

2.3.4 Batham Gate Road is lit through the settlement of Peak Dale and onwards to the west towards Batham Gate and the A6. The route operates under a 40mph urban speed limit at the site frontage and through Peak Dale. The route is also subject to a 7.5t weight limit (except for access) through the settlement.

2.3.5 Approximately 130m to the east of the proposal site, Batham Gate Road connects to the local side road route of School Road. School Road serves additional established residential development within the settlement of Peak Dale and local facilities including a social club, school & children's play area. The route provides onward south western local road connections towards Upper End, Waterswallows and Buxton (Fairfield).

2.3.6 To the east of the junction with School Road, Batham Gate Road becomes more rural in character, with limited frontage development and ultimately drops downhill towards a number of quarry sites and a bridge over the former Midland mainline rail route (retained as quarry sidings). To the east of the rail bridge the route provides rural lane connections towards the settlements of Peak Forest, Wormhill & Tideswell.

2.3.7 To the west of the proposal site, Batham Gate climbs up to a crest (the extent of the signed weight restriction area), before falling towards the settlement of Batham Gate and the A6. This section of the route is generally straight in horizontal alignment, with good forward visibility apart from over the section of crest. The route operates under 40mph controls through Batham Gate up to the junction with Waterswallows Lane (approximately 1200m to the west of the proposal site).

2.3.8 Immediately to the west of the junction with Waterswallows Lane, the route changes to national speed limit control, with no further frontage properties, and ultimately provides a terminal connection to the A6. The side road connections of Waterswallows Lane and the terminal section of Batham Gate Road are all regularly used by commercial large vehicle traffic serving the nearby Nestle Buxton Water facility and other commercial uses at the Waterswallows Business Park to the south. Waterswallows Lane and Batham Gate Road effectively form a local Y-connection to the A6, with traffic to / from Buxton (to / from the south west) signed to use Batham Gate Road and traffic to / from Dove Holes & Chapel En Le Frith (to / from the north west) signed to use the northern section of Waterswallows Lane (see **Appendix TS1**). On site observations and reference to collected local traffic data indicate that the majority of traffic movements follow this signed local routing strategy.

2.3.9 Batham Gate Road terminates to the A6 at a ghost island priority T-junction layout on the main A6 route – providing a separate right turning lane for northbound traffic from Buxton waiting to turn into Batham Gate Road without blocking through traffic. The layout of this junction is illustrated in site photos included in **Appendix TS1** to this report. The A6 is unlit and operates under a 50 mph speed limit at this point. Visibility to the A6 from the Batham Gate side road at this location is considered to be appropriate with respect to the operating speed limit.

2.3.10 The junction of the A6 / Waterswallows Lane to the north is of a simple priority T-junction layout. Lateral and forward sightlines at this junction are also suitable for local operating speeds.

2.4 Baseline Traffic Conditions

Observed Traffic Flow Levels

2.4.1 Traffic conditions on the immediate sections of Batham Gate Road to the proposal site have been established through a manual traffic survey undertaken in November 2013 at the main Batham Gate Road / School Road T-junction within Peak Dale. These traffic counts were undertaken for the following survey periods:

- AM 'Rush Hour' Period: 07:00 – 09:30;
- PM 'Rush Hour' Period: 15:30 – 18:00.

2.4.2 Maximum observed hourly traffic demand levels during each of the identified survey periods are illustrated in **Figure TS3** to this report, with maximum hourly flow levels (all vehicles) at the junction being noted to take place for the following time periods:

- AM Peak 08:00-09:00
- PM Peak 16:45-17:45

2.4.3 Additional traffic count information was also collected at the Batham Gate Road western terminal connection to the A6 for the same survey periods. Peak hour observed background traffic conditions are also illustrated in **Figure TS3**.

2.4.4 Review of this background survey data suggests that routes within the settlement of Peak Dale are generally very lightly trafficked even during traditional 'rush hour' periods, with maximum two-way observed traffic demand on Batham Gate Road in the vicinity of the proposal site frontage being as follows:

- AM Peak 08:00-09:00: 125 vehicles (6 HGVs / Buses)
- PM Peak 16:45-17:45 150 vehicles (2 HGVs / Buses).

2.4.5 Traffic demand on the A6 distributor road is noted to be at much higher levels, with peak hour demand to the immediate south of the Batham Gate Road terminal junction being as follows:

- AM Peak 08:00-09:00: 1125 vehicles (114 HGVs / Buses)
- PM Peak 16:45-17:45 1234 vehicles (98 HGVs / Buses).

Observed Vehicle Speeds

2.4.6 Vehicle speed readings have also been undertaken for the main approaches to the site frontage section of Batham Gate Road. These speed surveys were undertaken in accordance with TD22/81 "Vehicle Speed Measurement on All Purpose Roads" guidance and were carried out for vehicle movements at the following locations:

- Westbound traffic: 120m to the east of the proposal site frontage:
- Eastbound traffic: 120m to the east of the proposal site frontage.

2.4.7 Recorded vehicle speeds from these surveys identify the following average and 85th percentile wet-weather speed readings:

Average Recorded Speeds:

- Westbound traffic: 32.5 mph (52 kph);
- Eastbound traffic: 31.5 mph (51 kph).

85th Percentile Recorded Speeds:

- Westbound traffic: 38.5 mph (62 kph);
- Eastbound traffic: 38.5 mph (62 kph).

2.4.8 Reference to both DfT guidance DMRB (TS9/93) and the more recent research set out in CIHT design guidance document 'Manual for Streets 2' suggests that appropriate visibility criteria for new side roads access routes demonstrating such 85th speed characteristics would be as follows

(taking into account relevant approach gradient – see **Appendix TS3** to this report):

Leading Direction (Westbound Approach Traffic: +2.4% uphill gradient)

- Absolute minimum acceptable sightline requirement: 2.4m by 74.7m

Non - Leading Direction (Eastbound Approach Traffic: -6.4% downhill gradient)

- Absolute minimum acceptable sightline requirement: 2.4m by 85.6m

NB - Above calculations include for upward correction in reaction time and vehicle deceleration rate for observed speeds over 60kph.

2.5 Road Safety: Review of Personal Injury Accident Records

2.5.1 An appraisal of the operational safety of the immediate local network to the proposal site has been carried out through a review of Personal Injury Accident (PIA) data (the standard accident data utilised for the analysis of historical road safety trends) for the most recent nine year search period available from Derbyshire Constabulary (1 January 2005 – 31 December 2013). Details of the accident review search area and the location of the recorded accident events are illustrated in **Figure TS4** to this report.

2.5.2 A review of the available accident information identifies that only one injury accident has been recorded within the identified search area. This accident occurred at the Batham Gate Road / School Road junction and was a slight injury classification event, taking place on a summer evening. The incident involved a collision between a vehicle turning right out of School Road and a through vehicle movement on Batham Gate Road.

2.5.3 Given the above review of accident history, it is ultimately concluded that there are no reasons to consider that the development of a new residential scheme, involving formation of a new direct access to Batham

Gate Road, would result in a material impact on overall highway safety and therefore call the scheme into question.

2.6 Site Sustainability & Accessibility

2.6.1 Residential development at the Peak Dale proposal site would need to be delivered to broadly accord with planning and transport related sustainability objectives as set out in both local and national development policy documents. These documents state two primary transport objectives when considering the location of new development:

- The need to reduce the need to travel, especially by private car;
- The need to promote accessibility to a range of sustainable travel options.

2.6.2 The nature of local sustainable transport opportunities available within the immediate catchment of the Peak Dale proposal site are summarised in the paragraphs below.

Access to Public Transport

2.6.3 Closest bus stops to the proposal site are located on Batham Gate Road, within 100m walk from the centre of the proposal site. The stops are located immediately to the west of the Batham Gate Road / School Road junction and provide a passenger shelter and information board for Buxton bound services - whilst the eastbound stop is a simple flagpost stop. A 100m walk catchment falls well within the preferred maximum walking distance threshold for regular access to public transport from new development (400m) as identified by the Chartered Institution of Highways and Transportation (CIHT) Document “Guidelines for Planning for Public Transport in Developments”. Further bus stops (services 189/190 & 68) are located on School Road close to the primary school.

2.6.4 A plan of the existing bus route connections available at the local bus stops to the proposal site is illustrated in **Figure TS5** to this report. This

demonstrates that these local bus stops are served by the following formal public services:

Table TS2.1 – Local Public Transport Connections

Route Number	Route Description	Mon - Fri	Sat	Sun
68	Buxton – Tideswell - Castleton	1 per day	1 per day	-
189 / 190	Whaley Bridge – Chapel – Chinley – Peak Dale - Buxton	6 per day	6 per day	-
Skyline 199	Manchester Airport – Stockport – Disley – Chapel – Peak Dale - Buxton	Hourly	Hourly	Hourly

2.6.5 Review of these service opportunities demonstrates a minimum hourly bus connection to the key local employment and retail centres of Buxton and Chapel-en-le-Frith & Stockport, along with links to other local settlements such as Dove Holes, Whaley Bridge and Chinley.

Accessibility to Local Facilities (Walking and Cycling)

2.6.6 In addition to the local public transport connections set out above, the location of the proposal site is anticipated to allow for a limited number of 'everyday' journeys to be undertaken on foot or by cycle. The Chartered Institution of Highways and Transportation (CIHT) Document 'Providing for Journeys on Foot' identifies suitable maximum walking distances to common facilities. This document identifies the following guidance re: acceptable walking thresholds for access to community facilities and shops:

- Desirable: 400m;
- Acceptable: 800m;
- Preferred Maximum: 1200m.

2.6.7 A small range of local services and leisure opportunities lie within an acceptable walk journey of the site, including:

- Primary School;
- Pre School / Nursery;

- Rocks Club / Public House;
- Public play area;
- Football pitch and Bowls Club.

All of the above identified facilities lie within the CIHT desirable walk catchment to the proposal site and can be accessed via formal segregated footway connections within the settlement of Peak Dale.

2.6.8 In addition to walking opportunities, cycling has also been recognised to have the potential to substitute for short car trips – particularly those less than 5km and to form part of a longer journey by public transport. The location of the proposal site allows access to the local settlement of Dove Holes, along with the majority of the built up area of Buxton (see **Figure TS6** to this report). Details of available formal local cycling routes and connections are illustrated in **Figure TS7** to this report.

Summary

2.6.9 Overall it is concluded that the Peak Dale proposal site represents an acceptable location for new residential development, being located within an existing mature residential area, within 150m walk of bus stops served by regular bus connections and within a walk / cycle catchment of a limited range of local services / facilities. Such locational characteristics should assist in meeting the sustainable planning objectives of promoting opportunities for the use of alternative travel modes to the private car and managing the overall traffic impact associated with new development. Additional housing should also help support the viability of remaining local services.

3.0 REVIEW OF THE DEVELOPMENT PROPOSALS

3.1 Development Proposals

3.1.1 The proposal scheme comprises comprehensive residential development of Land off Batham Gate Road, Peak Dale. A total of up to 27 dwellings is envisaged as being deliverable across the site, along with appropriate levels of public open space and in-curtilage car parking.

3.1.2 A masterplan of the proposal scheme is included as **Figure TS8** to this report.

3.2 Proposed Highway Access Arrangements

3.2.1 It is proposed that the residential proposals would be served via a new vehicle and pedestrian access point from Batham Gate Road, close to the existing field access identified in section 2.3 to this report. This existing field access would be closed as part of the re-development proposals.

3.2.2 The new development access would be formed by a new 5.5m wide cul-de-sac route, with 6m entry / exit radii and a 2m footway provided to one side of the road. It is anticipated that this main site access road route would be lit and ultimately would be offered up for formal adoption as public highway.

3.2.3 The location of the proposed access point has been carefully selected in order to achieve appropriate lateral sightlines from the new site access point. **Figure TS9** to this report, demonstrates that the proposed site access arrangements would include for a limited kerb build out of less than 400mm from the existing kerb alignment, in order to deliver the following lateral sightlines when measured to the nearside kerb of Batham Gate Road:

- Leading direction (to the right): 2.4m by 120+m
- Non-leading direction (to the left): 2.4m by 86m to inside kerb
  2.4m by 120m to 1m from kerb.

3.2.4 Reference to relevant national design standard requirements (see section 2.4 to this report) demonstrates that the predicted levels of achievable lateral visibility at the site access junction are entirely appropriate for prevailing operating conditions on Batham Gate Road at this location.

3.2.5 The proposed kerb build out would be delivered at a minimum 1:20 taper across the site frontage and would tie into existing kerblines. The effect of the proposed build out works would be to reduce the immediate section of Batham Gate Road to circa 6.9m – 7.0m. Such residual width is suitable to allow for the two-way passage of large vehicle movements and furthermore offers a similar carriageway provision to the section of Batham Gate Road to the west of the site frontage.

3.3 Car Parking

3.3.1 It is proposed that residential car parking across the site would typically be provided at minimum 200% parking rates (i.e. 2 spaces per 2/3 bedroom dwelling), with 3 spaces provided to support the single proposed four bedroom property. Such car parking provision would be delivered either as in-curtilage parking or within designated resident parking areas.

3.3.2 The proposed levels of parking provision are anticipated as being appropriate to help avoid the need for on-street residential parking both within the main development area and potential overspill onto surrounding routes.

3.4 Vehicle Servicing

3.4.1 A suitable residential standard turning head facility would be provided at the end of the main development cul-de-sac access road to ensure suitable turning areas for typical residential scale service vehicles - such as refuse collection vehicles or standard rigid HGV delivery vehicles. Details of large vehicle swept path analysis are provided in **Appendix TS4** to this report.

4.0 PREDICTED TRAVEL DEMAND TO THE PROPOSAL SITE

4.1 Introduction

4.1.1 This section of the Transport Statement seeks to identify the levels of traffic demand anticipated to be generated by the proposed residential development scheme at Peak Dale and the likely local routing of this traffic.

4.2 Predicted Trip Demand Levels Associated with the Proposal Scheme

4.2.1 **Appendix TS5** to this report illustrates the trip demand profile for relevant private residential development sites held within the TRICS database. TRICS is a nationally regarded source of historical trip demand data and contains observed traffic data for a large number of development-type sites and, as such, can be considered to produce reliable base trip rate data.

4.2.2 The chosen sites from the TRICS database utilised in this assessment have been selected for their general characteristics similar to the Peak Dale site, viz:

- Suburban area / Edge of town development;
- Development size of 15 - 75 units; and,
- Not including sites in Greater London or Eire.

4.2.3 Average trip rates (per dwelling) for the traditional AM / PM 'rush hour' time periods are illustrated in the table below, along with trip rates for the core 12hr weekday day time period 07:00-19:00. These trip rates have been applied to the total residential development size proposed at the Peak Dale site (up to 27 dwellings), with the results set out below.

Table TS4.1 – Predicted Development Trip Generation (Average Trip Rates)

	Average Trip Rates (per dwelling)			Trip Demand for 27 dwellings		
	Arrivals	Departures	**Total**	Arrivals	Departures	**Total**
Residential Units						
AM Peak (08:00-09:00)	0.205	0.383	**0.588**	6	10	**16**
PM Peak (17:00-18:00)	0.395	0.238	**0.633**	11	6	**17**
12hr (07:00 – 19:00)	2.613	2.572	**5.185**	71	69	**140**

4.2.4 The above analysis demonstrates that the proposal scheme is not anticipated to generate a substantive level of peak hour travel demand, with maximum 2-way (in + out) vehicle demand associated with the proposal scheme being of the order of 16 - 17 vehicle movements per hour. Such demand is the equivalent of less than 1 development vehicle trip movement every 3 minutes and is unlikely to result in a material impact on local network operating conditions.

4.2.5 As a sensitivity test, an additional development trip generation scenario has been considered for the proposal site, based on calculated 85th percentile peak hour trip rates. Such 85th percentile estimates provide an indication of a realistic maximum trip generation demand for travel to / from a development site and therefore ensures for a robust 'worst case' assessment of operational impact. Assessments based on these higher rates are often required by local highway authorities when reviewing the capability of a proposed new site access to accommodate a range of future traffic flow levels.

4.2.6 Details of the calculation of the 85th percentile rates are included in **Appendix TS5** to this report, with trip rates / predicted trip demand levels illustrated in the table below:

Table TS4.2 – Predicted Development Trip Generation (85th Percentile Trip Rates)

	85th Percentile Trip Rates (per dwelling)			Trip Demand for 27 dwellings		
	Arrivals	Departures	**Total**	Arrivals	Departures	**Total**
Residential Units						
AM Peak (08:00-09:00)	0.230	0.464	**0.694**	7	15	**22**
PM Peak (17:00-18:00)	0.524	0.329	**0.852**	13	9	**22**
12hr (07:00 – 19:00)	3.359	3.381	**6.740**	83	85	**168**

4.2.7 Such worst case trip estimates still only suggest maximum 2-way trip demand to the residential proposal site of just 22 vehicles per hour, or less than 1 additional development trip movement every 2 minutes.

4.3 Predicted Local Development Trip Assignment

4.3.1 The assignment of the predicted peak hour development trip demand to the immediate local highway network has been based on observed background traffic demand patterns on Batham Gate Road at the site access and turning movement patterns at the junctions of Batham Gate Road with School Road (for traffic travelling east) and the A6 (for traffic travelling to the west). Predicted AM & PM peak development traffic route assignment proportions are illustrated in **Figure TS10** to this report.

4.3.2 Application of the average and 85th percentile development trip demand estimates to the above routeing proportions suggests the peak hour local network development network traffic assignment illustrated in **Figure TS11 & Figure TS12** respectively.

5.0 ASSESSMENT OF ANTICIPATED NETWORK TRAFFC IMPACT

5.1 Introduction

5.1.1 This section of the report considers the assessment of the operation of the immediate local highway network to the proposed Peak Dale residential development site, and the ability of this network, including the proposed new site access junction, to accommodate all traffic flow movements predicted to access the proposal scheme.

5.1.2 The extent of operational impact assessment included within this section reflects the generally limited scale of residential development proposed and the generally low traffic demand nature of the local Peak Dale highway network and includes:

- Link / flow impact for Batham Gate Road to the east and west of the proposal site access.

- Junction operational capacity assessment for the proposed development site access junction to Batham Gate Road (via PICADY modeling).

5.1.3 In order to provide for a comparative assessment of future network operating conditions, the analysis set out within this Transport Statement includes for the consideration of two main future traffic scenarios:

- **'Do Nothing' Baseline Scenario** – Operation of the local Peak Dale highway network, assuming that no residential development takes place at the proposal site.

- **'Do Something' Baseline + Development Scenario** – Operation of the local Peak Dale highway network including for the development of the proposal site for up to 27 residential units.

5.1.4 The above approach is in accordance with guidance on assessment good practice set out in DfT document "Guidance on Transport Assessment".

5.1.5 The results of any network operational assessment should be viewed in the context of advice regarding development traffic impact as set out in the National Planning Policy Framework (NPPF) document. Paragraph 32 to this document provides guidance on the nature and detail of development transport appraisal to be carried out to support development and those key matters to be considered when determining the suitability of development proposals:

> **"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:**
>
> - **the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;**
> - **safe and suitable access to the site can be achieved for all people; and**
> - **improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe." (Para 32).**

5.1.6 The last bullet point of paragraph 32 to NPPF is considered to be of key importance in the context of the review of the Peak Dale proposal scheme and the assessment of the operation of the immediate local highway network. NPPF clearly identifies that development should only be refused in those cases where highways impact would be 'severe' - which is typically understood to mean situations where development is likely to result in a material detrimental 'step change' change in circumstances when compared to predicted Baseline / 'Do-Nothing' conditions. Should no severe impact be identified then a proposal scheme should not be subject to a highways objection.

5.2 Assessment Parameters

5.2.1 For the purposes of this assessment, full development opening year for the proposed residential development is anticipated to be end of 2015. In order to meet the requirements of DfT good practice guidance, however, network assessments have been carried out at a future 'design year' of 2020 (i.e. 5 years from the date of a 2015 planning submission).

5.2.2 Assessments have been carried out for maximum traffic conditions during the traditional AM and PM rush hour peak periods. These time periods are as follows:

- Traditional AM peak hour (08:00-09:00);
- Traditional PM peak hour (16:45-17:45).

Background Network Traffic

5.2.3 Background traffic demand estimates for the immediate local highway network to the proposal site have been calculated based on the growthing of the observed November 2013 traffic count information to 2020 future year estimates using appropriate locally adjusted (Buxton area) National Traffic Model growth factors. The methodology for the calculation of growth factors is set out in **Appendix TS6** to this report and the relevant key growth factors summarised below.

2013 - 2020

- AM Peak: 2013 – 2020 Factor: 1.088
- PM Peak: 2013 – 2020 Factor: 1.094

5.2.4 Baseline traffic estimates for the immediate local network are illustrated in **Figure TS13** to this report for the 2020 future assessment year. These estimates represent 'Do-Nothing' Baseline future year traffic conditions.

5.2.5 'Do-Something' Baseline + Development traffic estimates (based on average trip rates) are set out in **Figure TS14.** An additional Do-

Something 'sensitivity test' 2020 future year scenario (based on 85th percentile trip rates) is illustrated in **Figure TS15**.

5.3 Link Flow Assessment

5.3.1 Reference to Chartered Institution of Highways and Transportation (IHT) 'Guidelines for Traffic Impact Assessment' suggests that more detailed analysis of highway impact and / or capacity improvements is only likely to be required where either:

- Traffic to / from the development exceeds 10% of existing two way traffic on the adjoining highway; or,

- Where traffic to / from the development exceeds 5% of the existing two way traffic flow on the adjoining highways at locations where traffic congestion exists within the assessment period or in other sensitive locations.

5.3.2 This position was reviewed and updated in March 2007 DfT "Guidelines for Transport Assessment" which note:

> **"If the TA confirms that a development will have material impact on the highway network, the level of impact at all critical locations on the network should be established. A particular example of material impact would be a worsening of congestion. In congested areas, the percentage traffic impact that is considered significant or detrimental to the network may be relatively low (possibly below the average daily variation in flow), and should have been determined in discussions with the relevant highway authorities. For the avoidance of doubt, the 1994 guidance regarding the assessment thresholds of 10 per cent and 5 per cent levels of development traffic relative to background traffic is no longer deemed an acceptable mechanism, since it creates an incentive in favour of locating development where high levels of background traffic already exist."**

5.3.3 Notwithstanding the latest DfT advice, in the case of the immediate local highway network to the Peak Dale proposal site, it is considered that the

traditional 5% & 10% thresholds still represent a reasonable initial 'contextual guide' as to the level / extent of development traffic operational impact on immediate local routes.

5.3.4 Link flow operational assessments have therefore been carried out for the following link sections:

- Batham Gate east of the proposal site access;
- Batham Gate west of the proposal site access;
- A6 to the south of the Batham Gate junction.

5.3.5 It is considered that these immediate sections of route network would experience the maximum traffic demand associated with the proposed Peak Dale Residential scheme. Should link impact levels on these immediate sections of route prove to fall within acceptable criteria, it can reasonably be concluded that development traffic at more remote network locations would also lie within suitable thresholds.

5.3.6 **Table TS5.1** below demonstrate the anticipated changes in two-way 2020 future year link flows associated with the proposed residential development (average trip rate scenarios).

Table TS5.1 – Predicted Changes in Link Flow on Immediate Sections of the Local Highway Network to the Proposal Site (Average Development Trip Rates)

	2020 AM Peak Period			2020 PM Peak Period		
All Vehicles	Do Nothing	Do Something	% Change	Do Nothing	Do Something	% Change
Batham Gate Road (East of proposal site)	136	144	5.88%	164	173	5.49%
Batham Gate Road (West of proposal site)	136	144	5.88%	164	172	3.35%
A6 (South of Batham Gate)	1224	1229	0.41%	1349	1354	0.37*

Two-way flow totals

5.3.7 An additional 2020 link flow assessment has also been carried out for the sensitivity test 85th percentile development scenario. The results of this 'worst case' assessment are illustrated in **Table TS5.2** below.

Table TS5.2 – Predicted Changes in Link Flow on Immediate Sections of the Local Highway Network to the Proposal Site (85th Percentile Trip Rates)

	2020 AM Peak Period			2020 PM Peak Period		
All Vehicles	Do Nothing	Do Something	% Change	Do Nothing	Do Something	% Change
Batham Gate Road (East of proposal site)	136	147	6.61%	164	175	6.71%
Batham Gate Road (West of proposal site)	136	147	6.61%	164	175	6.71%
A6 (South of Batham Gate)	1224	1230	0.49%	1349	1355	0.44%

Two-way flow totals

5.3.8 Review of the link flow assessment results demonstrates that typically the immediate sections of the A6 to the proposal site would not experience increases in traffic demand in excess of 0.5% of Do-Nothing Baseline levels. Maximum predicted link impact would take place during the PM peak period on the immediate section of Batham Gate Road to the site frontage, where an increase in traffic demand of 6.7% of Do-Nothing levels is predicted as a result of the operation of the residential scheme in line with 85th percentile trip rates. In practice such a percentage change represents actual additional trip demand of just 11 vehicles per hour, a level of traffic unlikely to give rise to distinguishable local network operational effects.

5.4 Junction Capacity Assessments

5.4.1 Notwithstanding the conclusions of the link flow / link capacity assessments set out above, a detailed review of junction operational capacity has been carried out for the site access junction connection to Batham Gate Road.

5.4.2 Operational capacity has been assessed using DfT standard analysis software JUNCTIONS8 (PICADY models: T-junction layouts). PICADY splits the hourly traffic estimates into 15-minute time segments, including for peak operation above the hourly average and the results generated indicate the peak Ratio of Flow to Capacity (RFC) during these time periods and the anticipated traffic queues. RFC values for approach arms between 0.00 and 0.85 are generally considered to represent stable and acceptable operating conditions. Values between 0.85 and unity (1.0) represent variable operation (i.e. possible queue build up and increases in vehicular delay for traffic moving through the junction). RFC values in excess of unity represent overloaded conditions (i.e. congested conditions).

5.4.3 Results of the PICADY model runs are summarised in **Table TS5.3** below, with relevant model output attached as **Appendix TS7**.

Table TS5.3: Site Access Connection to Batham Gate Road: PICADY Assessment Results

2020 Background + Development (Average Trip Rates)

.	AM Peak			PM Peak		
	Flow (pcus)	RFC	Queue	Flow (pcus)	RFC	Queue
Proposal Site to Batham Gate Rd	11	0.03	0.04	6	0.02	0.02
Batham Gate Rd RT to site	3	0.01	0.01	5	0.01	0.01

2020 Background + Development (85th Percentile Trip Rates)

.	AM Peak			PM Peak		
	Flow (pcus)	RFC	Queue	Flow (pcus)	RFC	Queue
School Rd to Batham Gate Rd	15	0.02	0.03	8	0.01	0.01
Batham Gate Rd RT to site	4	0.01	0.01	6	0.01	0.01

5.4.4 Review of the results set out in the table above indicates that the proposed site access junction would operate efficiently during all time periods, even including for robust 85th percentile No significant queuing or

delay is predicted at the junction, which would offer a substantive level of spare capacity.

5.5 Impact Summary

5.5.1 Capacity assessments have been undertaken for key immediate links and junctions to the proposed Peak Dale residential development site for both average trip rate and worst case 85th percentile sensitivity test scenarios. The results of these tests demonstrate that the marginal changes in operational performance predicted associated with the development of the proposal scheme do not represent a material worsening in local traffic conditions and, in practice, are unlikely to be distinguishable from existing day-to-day variations in Baseline traffic flows. No local highway improvements are therefore considered necessary in order to accommodate the proposed development at Peak Dale, with the network predicted to continue to operate efficiently, with a level of spare capacity.

6.0 SUMMARY AND CONCLUSIONS

6.1 This Transport Statement has been prepared by Axis to consider relevant highways and transport issues associated with the development of land off Batham Gate Road, Peak Dale for residential purposes. The scheme would comprise the comprehensive development of the site for up to 27 residential units, associated public open space and landscaping.

Existing Land Use & Planning Designation

6.2 The proposal site is an irregular shaped land parcel, located within the settlement of Peak Dale and represents existing agricultural and pasture land. A depression feature initially highlighted to the highway authority has since been determined to be an old cess pit, which is not anticipated to represent any barrier to the delivery of a local highway alignment or adoption of any subsequent route.

6.3 HPBC is currently updating the Borough development plan and the proposal site has been identified as potential allocation land for housing development (policy H3) within the current submission draft local plan. The draft allocation identifies that the site could potentially deliver up to 25 dwellings within the early phase period of the emerging Local Plan, (i.e. during the years 2012 to 2018). The draft Local Plan was submitted to the Secretary of State on 28th August 2014 and is programmed to move to the Examination in Public stage in early 2015.

Existing Vehicular Site Access Arrangements & Network Connections

6.4 The proposal site is currently served by a single vehicular connection point to the local adopted highway network. This access point is a gated, dropped kerb agricultural field access point to Batham Gate Road, located to the northern boundary of the site. The main vehicle access to the proposed residential scheme would be based on an access point along this northern development frontage.

6.5 Batham Gate Road represents the main local distributor road route through the settlement of Peak Dale. The route is of a single carriageway layout of circa 6.9m – 7.3m in the vicinity of the proposal site, with local side road connections being of a simple 'give-way' T-junction design.

Baseline Conditions

6.6 Traffic conditions on the immediate sections of Batham Gate Road to the proposal site have been established through a manual traffic survey undertaken in November 2013 at the main Batham Gate Road / School Road T-junction within Peak Dale. Review of this background survey data suggests that routes within Peak Dale are generally very lightly trafficked even during traditional 'rush hour' periods, with maximum two-way observed traffic demand on Batham Gate Road at the proposal site frontage being just 125 vehicles (6 HGVs / Buses) during the AM peak and 150 vehicles (2 HGVs / Buses) during the PM peak. Such traffic demand represents just 2.5 vehicle movements per minute or less.

6.7 Vehicle speed readings have also been undertaken for the main approaches to the site frontage section of Batham Gate Road. These speed surveys identify 85th percentile wet weather speeds of circa 38.5 mph in both approach directions - reflecting the 40 mph speed limit characteristics of this section of Batham Gate Road.

6.8 A review of available accident information identifies that only one injury accident has been recorded within a local search area to the proposal site within the past 9 years. This accident occurred at the Batham Gate Road / School Road junction and was a slight injury classification event, taking place on a summer evening. The incident involved a collision between a vehicle turning right out of School Road and a through vehicle movement on Batham Gate Road. Given this limited local accident history, it is ultimately concluded that there are no reasons to consider that residential development of the proposal site, involving formation of a new direct access to Batham Gate Road, would result in a material impact on overall highway safety and thus call the scheme into question.

Site Sustainability

6.9 The proposal site is considered that the Peak Dale proposal site represents an acceptable location for new residential development, being located within an existing mature residential area, within 150m walk of bus stops served by regular bus connections and within a walk / cycle catchment of a limited range of local services / facilities. Such locational characteristics should assist in meeting the sustainable planning objectives of promoting opportunities for the use of alternative travel modes to the private car and managing the overall traffic impact associated with new development. Additional housing should also help support the viability of remaining local services.

Development Proposals

6.10 The proposal scheme comprises residential development of Land off Batham Gate Road, Peak Dale. A total of up to 27 dwellings is envisaged as being deliverable across the site, along with appropriate levels of public open space and in-curtilage car parking. It is proposed that the residential re-development site would be served via a new vehicle and pedestrian access point from Batham Gate Road.

6.11 The location of the proposed access point has been carefully selected in order to achieve appropriate lateral sightlines from the new site access point when compare to prevailing recorded speed conditions on Batham Gate Road. Appropriate sightlines can be provided both laterally from the site access point and in a forward direction for traffic approaching the junction on Batham Gate Road.

Development Traffic Demand

6.12 Predicted levels of traffic generation associated with the proposal scheme have been calculated by reference to suitable small residential sites held in the TRICS database. The proposal scheme is not anticipated to generate a substantive level of peak hour travel demand, with maximum

2-way (in + out) site traffic not anticipated to exceed 16 - 17 vehicles per hour (average trip rates). Such demand is the equivalent of less than 1 vehicle trip movement every 3 minutes and is unlikely to result in a material impact on local network operating conditions. A further sensitivity test based on 85th percentile peak hour trip rates has also been carried out to ensure a robust assessment, suggesting a 'worst case' development demand of 22 vehicles per hour (2-way).

6.13 Assignment of this predicted peak hour development trip demand to the immediate local highway network has been based on observed background traffic demand patterns on Batham Gate Road at the site access and turning movement patterns at the junctions of Batham Gate Road with School Road (for traffic travelling east) and the A6 (for traffic travelling to the west).

Development Traffic Network Impact

6.14 Capacity assessments have been undertaken for key immediate links and junctions to the proposed Peak Dale residential development site for both average trip rate and worst case 85th percentile sensitivity test scenarios for a future year of 2020. The results of these tests demonstrate that:

- The proposed site access junction connection to the Batham Gate Road corridor is predicted to operate with significant spare capacity at the 2020 future assessment year, even including for 'worst case' 85th percentile development traffic conditions.

- The addition of the predicted development traffic to local roads is only anticipated to result in a marginal change in network operating conditions – at a level which is unlikely to be perceptible over and above day to day variations in Baseline traffic flow.

6.15 Given the above review of issues, it is concluded that there are no material operational capacity concerns related to the Peak Dale residential scheme and that therefore no off-site highway capacity

improvements are required to support the proposed development. The National Planning Policy Framework clearly identifies that development proposals should only be refused on highway grounds in those cases where highways impact has been demonstrated to be 'severe' - which is typically understood to mean situations where development is likely to result in a detrimental 'step change' change in circumstances when compared to predicted Baseline / 'Do-Nothing' conditions. It is considered that the proposals clearly meet the NPPF test and that the network operational effects of the scheme would be negligible.

Conclusions

6.16 Overall it is concluded that the proposed Peak Dale residential development represents an appropriate development option for the proposal site. The site is located within a mature residential settlement and therefore would offer some limited opportunities for sustainable development and help to support existing local services. In addition, the proposals are not anticipated to generate a substantive level of new traffic demand, which could be safely and efficiently accommodated by the local highway network without the need for off-site improvements. Based on the above we would commend the proposals to the Council.