

**Surface Water Assessment**  
**of Proposed Residential Allocations at**  
**Gascow Farm and Croftlands, South Ulverston**

## 1. **Introduction**

The Examination in Public into the Land Allocations DPD has been suspended to enable SLDC to undertake further evidence gathering including the production of a district wide and site specific viability assessment. As part of this process SLDC have raised viability concerns regarding the proposed allocations to the south of Ulverston. One of the concerns relates to the requirement for a comprehensive surface water solution across all three sites, and this report provides an initial assessment to address these issues.

Integra Consulting have been instructed to undertake an initial assessment of the existing and proposed surface water conditions in relation to the proposed allocations at Gascow Farm and Croftlands East which comprise two out of the three sites currently being proposed for residential allocation. For completeness, the report also considers the Croftlands West site as the three sites are closely related in terms of surface water management.

## **2. Existing Surface Water Conditions**

The first site under consideration is Gascow Farm. This site is approximately 12.5ha in site area and is located immediately to the west of Priory Road. This site comprises Gascow Farm itself and three adjoining fields, one to the south and two to the south west. The land rises from Priory Road up towards the Croftlands East site by approximately 20m. There is a ditch to the East of Priory Road and the Ordnance Level at this point is approximately 13m above datum. The site lies approximately 1 mile in from the coast. The 1 in 200 year sea flood event comes to a position just East of Priory Road.

Croftlands East is approximately 14ha in size and comprises three main agricultural fields and is bound by Mountbarrow Road to the west. The land rises approximately a further 10m up towards Croftlands West. The majority of the Croftlands West site is located west of Mountbarrow Road and comprises approximately another 14ha of area. The land rises approximately another 10m and surrounds Nook Farm. A watercourse runs west to east across Croftlands West and into a culvert at the junction with Mountbarrow Road. Following discussions with the respective land owners, this watercourse floods on a regular basis over an area extending into both Croftlands East and West which lies within the 1 in 100 year flood area.

We understand from the land owner of Gascow Farm that this culvert may discharge into a combined sewer within Parkhead Road, however, this needs to be investigated further.

### 3. **Proposed Surface Water Strategy**

The greenfield run off rates for each land parcel have been calculated using the Environment Agency's calculator. The greenfield run off rates for each parcel are as follows:

- Gascow Farm - 85 litres/s;
- Croftlands East - 100 litres/s;
- Croftlands West - 100 litres/s.

The Croftlands West site lies at the head of the natural land drainage run from west to east. The site drains into the existing watercourse running across the site and any proposed development of that parcel would drain into that watercourse with the flows attenuated by the use of onsite attenuation. The approximate size of that attenuation would be a SUDS pond of 3,500 cu. m capacity or alternatively an attenuation tank of 2,000 cu. m capacity.

The Croftlands East site has approximately the same run off rate as Croftlands West and would need similar sized attenuation in the form of a SUDS pond of 3,500 cu. m capacity or alternatively an attenuation tank of 2,000 cu. m capacity.

The flow from these attenuation measures would need flow through the Gascow Farm site unless an alternative route can be established down towards Priory Road or it can be proven that the existing surface water flows already discharge into the culverted watercourse issuing from Croftlands West. Under these circumstances there would be no need to route the flows from Croftlands East into the Gascow Farm site.

The Gascow Farm site would need on site attenuation measures consisting of a SUDS pond in the region of 3,000 cu. m or an attenuation tank of 1,750 cu. m. The preferred attenuation solution would issue through a hydrobrake into the existing ditch at Priory Road.

The way in which the Croftlands East site drains, either into this parcel or around this parcel, has an impact upon the required size of surface water drains running

through the Gascow Farm site. If the flow from Croftlands East is required to run through the Gascow Farm site, the pipe size would need to be increased from a DN150 to a DN300 with a consequential series of increases down the network. The hydrobrake would be increased after the attenuation measures to cater for the greenfield run off from Gascow Farm and Croftlands East. i.e.185 litres/s. This system has been previously agreed with the Environment Agency on other similar sites but would need agreement from the EA specifically for this site. If the flow from Croftlands East doesn't enter the head of the drainage run, it could be routed through a dedicated drainage run straight to the ditch, subject to third party approvals. On this basis, increased pipe sizes or hydrobrakes wouldn't then be needed for Gascow Farm site.

The storm water attenuation solutions discussed above (SUDS / attenuation tanks / Hydrobrakes and surface water pipes in the region of DN150 to DN300) are standard surface water management solutions and can be delivered within normal development costs of greenfield sites of this nature.

The surface water attenuation discussed within this report is sized for 1 in 100 year flood event for a SUDS pond and 1 in 30yr event for an attenuation tank as required by environmental standards.

#### 4. **Conclusions**

To conclude, this report demonstrates that a suitable and acceptable surface water scheme can be delivered both in relation to Gascow Farm site individually, and in conjunction with Croftlands West and Croftlands East if required. All proposed surface water solutions are deliverable within the land under the control of the respective land owners and could be delivered within the normal development costs associated with a strategic development of this size. We therefore conclude that there are no deliverability or abnormal viability concerns associated with the surface water strategy for this site.





Transportation Planning : Infrastructure Design

**SOUTH LAKELAND DISTRICT COUNCIL LDF**

**LAND AT CROFTLANDS AND GASCOW FARM, SOUTH ULVERSTON  
TRANSPORT CONSIDERATIONS  
EVIDENCE BASE**

**LEA HOUGH**

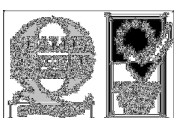
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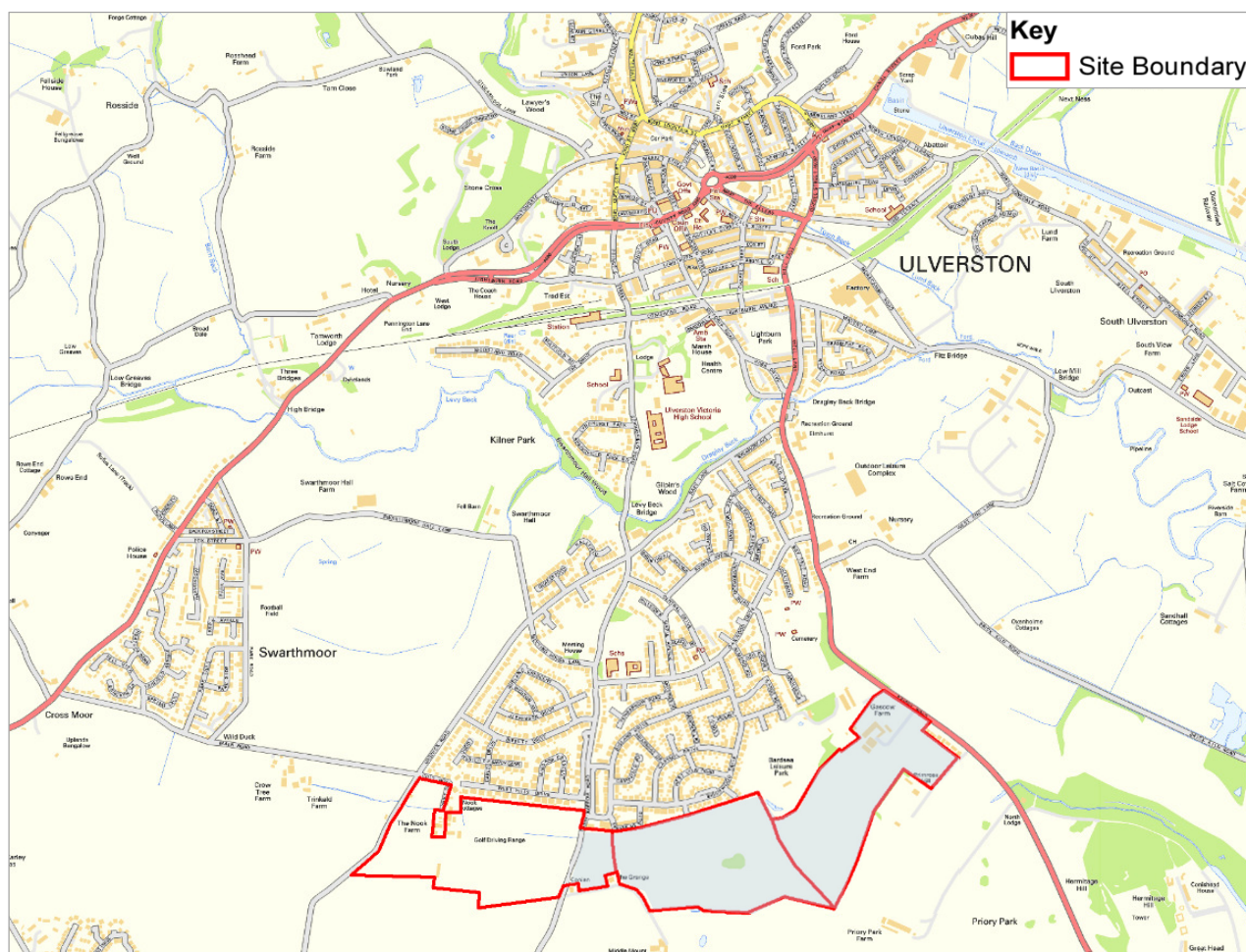
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## 1.0 INTRODUCTION

### Overview

- 1.1 SCP has been appointed by Lea Hough to provide specialist highways and transportation advice in relation to the promotion of land at Croftlands and Gascow Farm, Ulverston for residential development. The development site is made up of three parcels of land as shown on **Figure 1.1** below:-

**Figure 1.1 - Site Location Plan**



- 1.2 The parcels of land are referred to as Croftlands East, Croftlands West and Gascow Farm. The Croftlands East and Gascow Farm sites are located between the A5087 Coastal Road and Mountbarrow Road and is estimated to provide in the region of 438 dwellings. The Croftlands West site includes land at Nook Farm adjacent to Urswick Road and will provide in the region 309 dwellings.

- 1.3 Whilst this report considers the transport and access issues associated with all three parcels of the site given their interaction, this report specifically focuses on the proposed allocation land between Mount Barrow Road and Priory Road, as highlighted in blue above. Further details on the existing site and proposed developments are provided later in this report.

### **Purpose of Report**

- 1.4 Under the Planning and Compulsory Purchase Act (2004), Local Development Frameworks (LDFs) will replace the existing system of Local, Structure and Unitary Plans. Unlike Local Plans, the LDF does not comprise a single planning document but rather consists of a portfolio of documents based around a Core Strategy covering issues such as Housing, Employment and Retail.
- 1.5 South Lakeland District Council (SLDC) is at an advanced stage in the preparation of their LDF which will replace the existing South Lakeland Local Plan and form part of the Development Plan for South Lakeland, outside the National Parks. As part of the LDF process, SLDC has prepared a Land Allocations Development Plan Document (DPD) which identifies land for new housing and employment developments and protects green spaces in South Lakeland in accordance with the Core Strategy.
- 1.6 The Land Allocations DPD was subject to an Examination in Public (EIP) in October 2012. During the EIP the independent planning Inspector raised concerns in relation to the ‘soundness’ of the DPD and, following SDLC’s request, granted a suspension to the EIP to allow further work to be undertaken.
- 1.7 One of the concerns raised by the Inspector related to Highways with further evidence being requested. SDLC therefore commissioned independent highways consultants to undertake a review of the highways evidence previously submitted by the Council, undertake additional assessments of the cumulative impact of allocation in the Grange-Cartmel peninsula and prepare possible outline access designs on selected specific sites.
- 1.8 Having regard to the concerns raised by the Inspector, this report has been prepared as an evidence base to demonstrate the suitability of the land at Croftlands and Gascow Farm, from a transport and access perspective, for inclusion within SDLC’s DPD as a location for residential development.

## **Structure of Report**

1.9 The structure of this report is summarised as follows:-

- Chapter 2 – provides a review of location and existing uses of the site, local highway network and baseline transport conditions;
- Chapter 3 – provides a description of the proposed development and access strategy by all modes;
- Chapter 4 – identifies constraints on the local highway network, potential impact of the development at these locations and discusses potential mitigation measures; and
- Chapter 5 – provides a summary and conclusion to this report derived from the analysis presented in the above chapters

## **2.0 BASELINE CONDITIONS**

### **Site Location and Existing Uses**

- 2.1 As detailed earlier, development sites are made up of three parcels of land to the south of Ulverston, referred to as Croftlands West, Croftlands East and Gascow Farm. A description of the sites are provided below:-

*Croftlands West* – this parcel of the site has an area of approximately 17.7 ha and comprises a number of variously sized fields south of the existing Croftlands residential estate. Part of the site is occupied by a small private Golf Driving Range with the rest being in agricultural use. To the north, the site is bounded by the Lancastrian Hotel and Mountbarrow Service Station and residential properties along West Hills Drive. Part of the site is currently utilised by farm buildings at Nook farm however the listed farmhouse is excluded from the site. To the west the site is bounded by Urswick Road and the Ulverston-Swarthmoor Green Gap. To the south, the site is bounded by open fields. Mountbarrow Road crosses the site from north to south and there is a public right of way running east to west from Mountbarrow Road to Nook Farm.

*Croftlands East and Gascow Farm* – these parcels of the site have an area of 26.67 ha located between the A5087 Coastal Road and Mountbarrow Road which leads to Birkrigg Common and Scales. The site comprises Gascow Farm and a series of fields running west towards Mountbarrow Road. To the north, the site adjoins Bardsea Leisure Park and the edge of the existing Croftlands housing estate, where a number of residential cul-de-sacs abut the site. The eastern edge of the site is bounded by a public footpath running from The Grange to Parkhead Road. The southern edge of the site adjoins open countryside with a public footpath running along most of the southern edge of the site. At its western end, the site adjoins an area of smallholdings around Primrose Hill and a row of houses on Priory Road.

### **Local Highway Network**

#### *Urswick Road*

- 2.2 Urswick Road is located to the west of the development sites and provides a link between Red Lane in the south and Springfield Road / Rake Lane in the north and beyond to Ulverston. In the vicinity of the site Urswick Road is a two-way single carriageway rural road which has a carriageway width of approximately 6m. Urswick Road is subject to National speed limit and no footways or street lighting is provided.

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### *Mountbarrow Road*

- 2.3 Mountbarrow Road crosses the Croftlands West site in a north to south direction and provides a link between Barrow-in-Furness in the south and Ulverston in the north. Where Mountbarrow Road crosses the site it is a two-way single carriageway road which has a carriageway width of between 5m to 6m. For the majority of its length, no footways or street lighting is provided and it is subject to National speed limit. In the vicinity of Mountbarrow Service Station, the character of the road changes and becomes 30mph with footways and street lighting provided on both sides of the road.

### *A5087 Priory Road*

- 2.4 The A5087 Priory Road is located to the east of the sites and is a coastal road providing a link between Ulverston in the north and Barrow-in-Furness in the south. In the vicinity of the site the A5087 Priory Road is a two-way single carriageway road which has a carriageway width of between 7m to 8m and provides footways and street lighting on both sides of the road and is subject to a 40mph speed limit.

### *Birchwood Drive and Parkhead Road*

- 2.5 Birchwood Drive is located to the north of the site and is a residential access road which provides direct frontage to a number of residential properties. Birchwood Drive has a carriageway width of between 5m and 6m and provides footways and street lighting on both sides of the road. Birchwood Drive is a bus route which is discussed in more detail later in this report.
- 2.6 Two residential cul-de-sacs (Birchwood Close and an unnamed road) and Parkhead Road are located off the southern side of Birchwood Drive and abut the site. These roads provide direct frontage access to residential properties and have carriageway width of between 5m and 6m, with footways and street lighting provided on both sides of the road.

### *A590 Country Road*

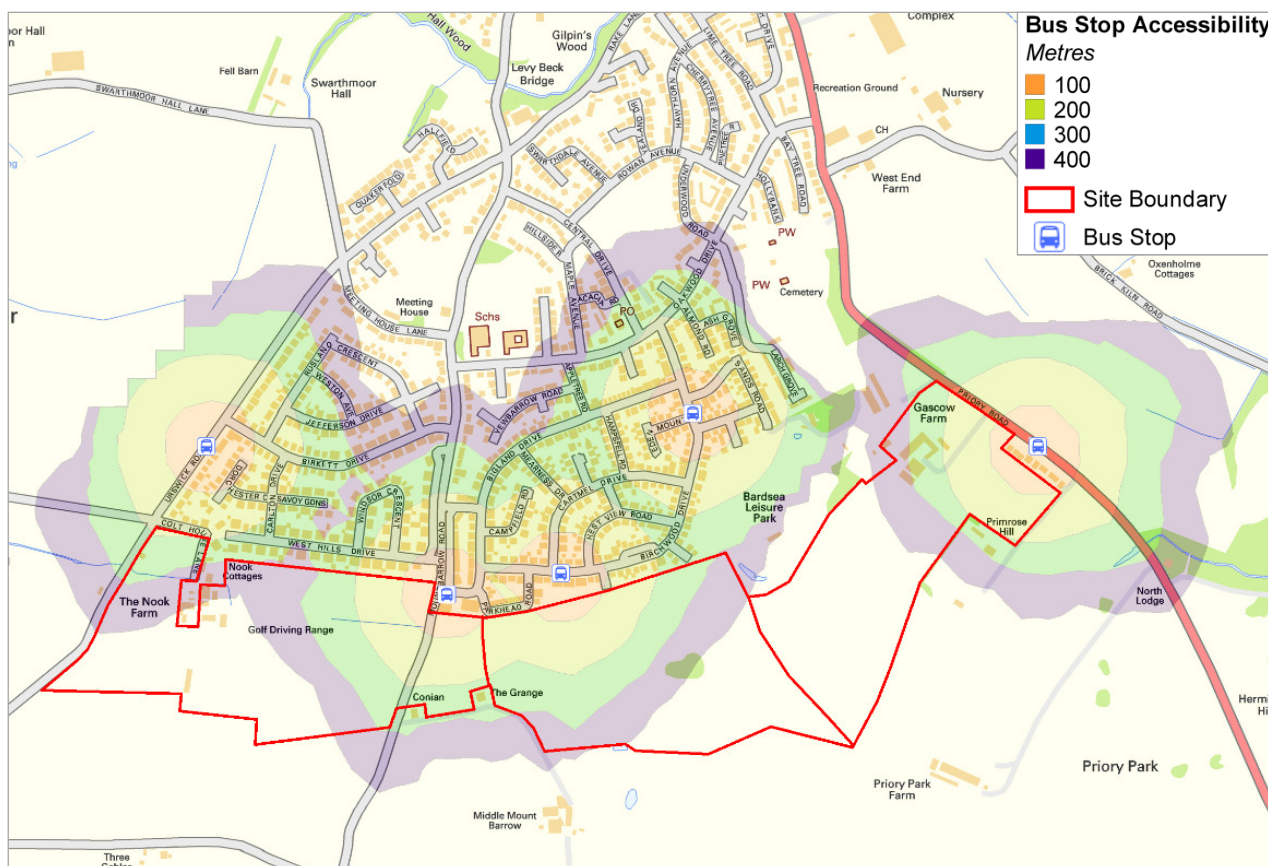
- 2.7 The A590 Country Road is located to the north of the site and is the main road running through Ulverston, providing a link between Barrow-in-Furness in the west and the M6 in the east. The A590 varies in width and character, with parts of the route being dual carriageway, whilst others comprise a two-way single carriageway.

- 2.8 For the majority of its length the A590 is subject to 40mph but this reduces to 30mph where it runs through the centre of Ulverston. The A590 carries a mix of local and through traffic with flows being in excess of 2000 vehicles per hour during the AM and PM peaks. Given the volume of traffic this road carries it creates a major barrier to movement between the northern and southern sections of Ulverston for pedestrians.

### Public Transport

- 2.9 The nearest bus stops to the site are located on Birchwood Drive and Priory Road. Guidance published by the IHT 'Planning for Public Transport in Developments' (1999), recommends that the maximum walking distance to a bus stop should be 400 metres, equating approximately to a five minute walk.
- 2.10 A 400m walk distance from the bus stops has therefore been modelled to illustrate the areas of the site that fall within the recommended walk distance of a bus stop, as shown on the **Figure 2.1** below.

**Table 2.1 – Bus Stop Location Plan**



- 2.11 The above demonstrates that a high proportion of the site already falls within the recommended 400m walk distance to a bus stop. This can be further improved through the introduction of additional bus stops, as discussed later in this report.
- 2.12 A summary of the bus services on Birchwood Drive and Priory Road are provided in **Tables 2.1** below.

**Table 2.1 – Bus Route Summary**

Number	Route Description	Maximum Frequency	
		Monday to Saturday	Sunday
6 Birchwood Drive	Barrow-in-Furness to Ulverston, via Dalton-in-Furness	30 mins	8 trips total
11 Priory Road	Ulverston to Barrow-in-Furness, via Newbriggin Rampside	2 hourly	-

- 2.13 Further details regarding the proposed public transport strategy are provided Chapter 3.

### 3.0 PROPOSED DEVELOPMENT AND ACCESS STRATEGY

#### Overview

- 3.1 This describes the proposed development and access strategy for all modes.

#### Proposed Development

- 3.2 It is anticipated that the development parcels will provide the following scale of development:-

*Croftlands West* – a 17.7 ha site potentially delivering up to 309 dwellings

*Croftlands East and Gascow Farm* – a 26.67 ha potentially delivering up to 438 dwellings

- 3.3 An indicative masterplan for the site has been developed and is shown on **Figure 3.1** below.

**Figure 3.1 – Indicative Masterplan**



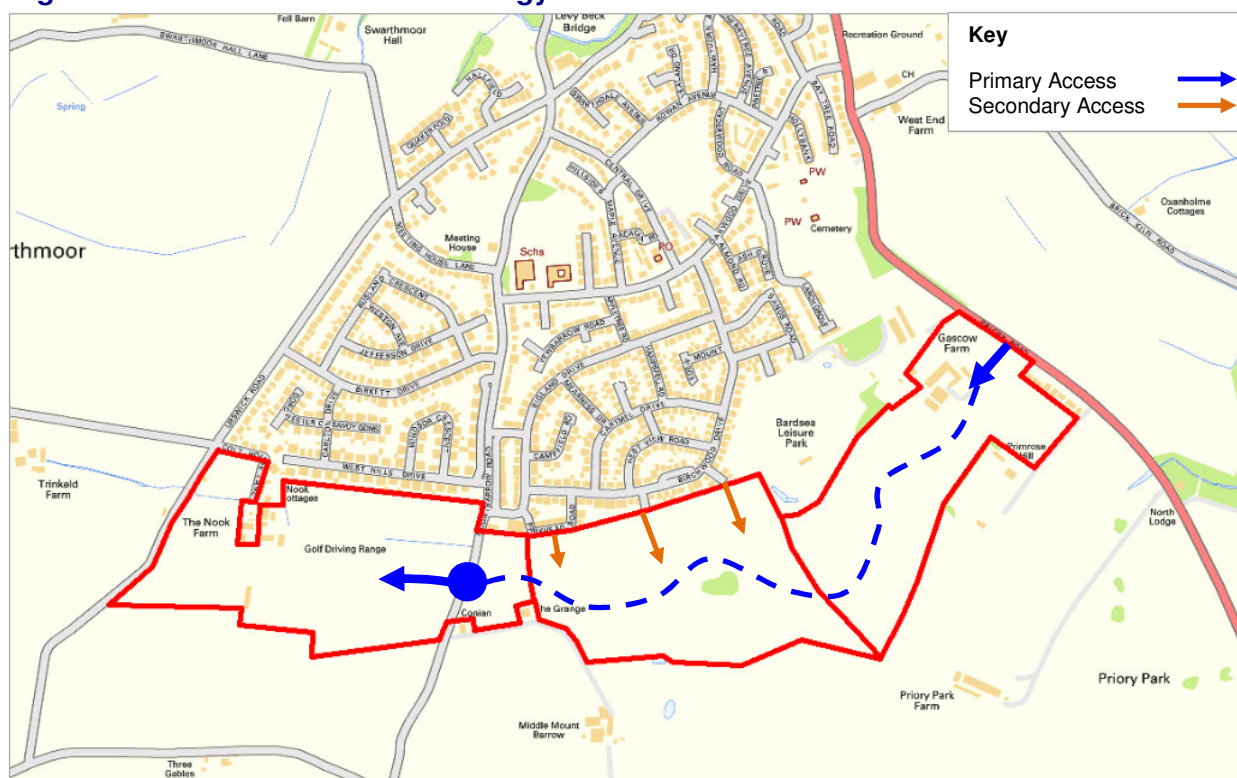
#### Vehicular Access Strategy and Internal Site Layout

- 3.4 As the site abuts adopted highway on the northern and eastern sides and given that Mountbarrow Road runs north to south through the development site, there are no identified constraints on access with a high number of options available. The optimum access strategy is described below and is broadly consistent with that identified in the KR Synergy report dated February 2012:-

- Mountbarrow Road – the optimum solution would be to introduce a four arm roundabout capable of serving development on both sides of Mountbarrow Road. The introduction of a roundabout would reduce the number of access points along this section of the road and have the added benefit of creating a gateway feature for vehicles travelling north, informing drivers that they are entering a built up environment. Whilst a roundabout is considered to be the optimum solution, it should be noted that the development sites on each side of Mountbarrow Road are not reliant on one another for access and, should they come forward independently from one another, this can be achieved through the introduction of separate staggered priority controlled junctions. In both options, Mountbarrow Road would be upgraded to provide footways along the sites frontage which will provide pedestrians with a safe route into Ulverston.
- A5087 Priory Road – the optimum solution would be to introduce a priority controlled ghost island right turn junction at the location of the existing access to Gascow Farm. This form of junction is considered to have sufficient capacity to accommodate the level of development proposed, having regard to the relatively low volume of traffic currently using the A5087 Priory Road. There is also potential to provide a number of secondary accesses from extensions to existing cul-de-sacs off Birchwood Drive and Parkhead Road, which would reduce the volume of traffic using the A5087 Priory Road access.

3.5 The vehicular access strategy is shown diagrammatically on **Figure 3.2** below.

**Figure 3.2 – Vehicular Access Strategy**



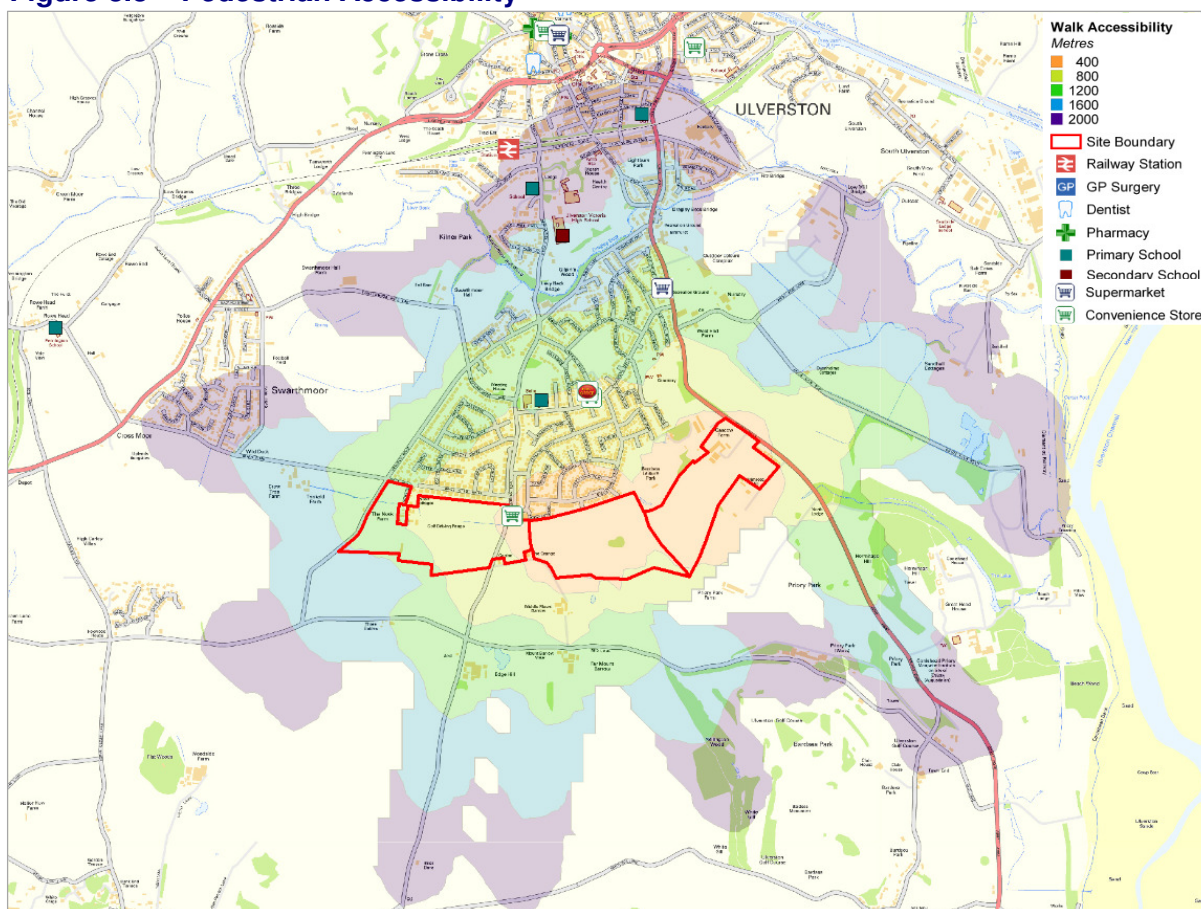
- 3.6 The above access strategy has been reviewed in detail and there are considered to be no constraints which would affect deliverability. In particular, sufficient land is available to enable site access junctions to be introduced which would meet relevant standards and have adequate capacity to accommodate the scale of development proposed.
- 3.7 The internal road network will be designed in accordance with guidance presented in the Manual for Streets (MfS) and follow a user hierarchy where vulnerable road users such as pedestrians, cyclists and people with disabilities are considered first. To achieve this it is anticipated that a variety of street types and shared surface areas will be introduced.
- 3.8 In relation to public transport, as a high proportion of the site already falls within the recommended 400m walk distance there is no requirement to have buses entering the site. However, should this be required to deliver the Council's wider public transport objectives and improve public transport coverage to the south of Ulverston then the internal road network could be designed to accommodate buses, with a potential link being provided between the A5087 Priory Road and Mountbarrow Road, as shown on **Figure 3.2** above.
- 3.9 Should this option be progressed then the internal road network will need to be carefully designed so that it can accommodate the movements of a bus, whilst at the same time discouraging the use of the route by general through traffic. It is anticipated that this will be best achieved through the use of residential streets, as advocated in the Manual for Streets, which will provide direct access to residential properties and at the same time have sufficient carriageway width to accommodate the movements of a bus.

### **Pedestrian and Cycle Accessibility**

- 3.10 The masterplan will be developed to ensure that a pleasant and safe environment is developed for pedestrians and cyclists, with convenient and direct linkages provided to key local facilities and public transport.
- 3.11 A comprehensive internal network of pedestrian and cycle routes will be developed which will take the form of routes that run adjacent to streets and dedicated traffic free routes. It is anticipated that the pedestrian / cycle network will be developed around the existing public rights of way that run east to west through the site, with these rights of way being upgraded through improved surfacing.

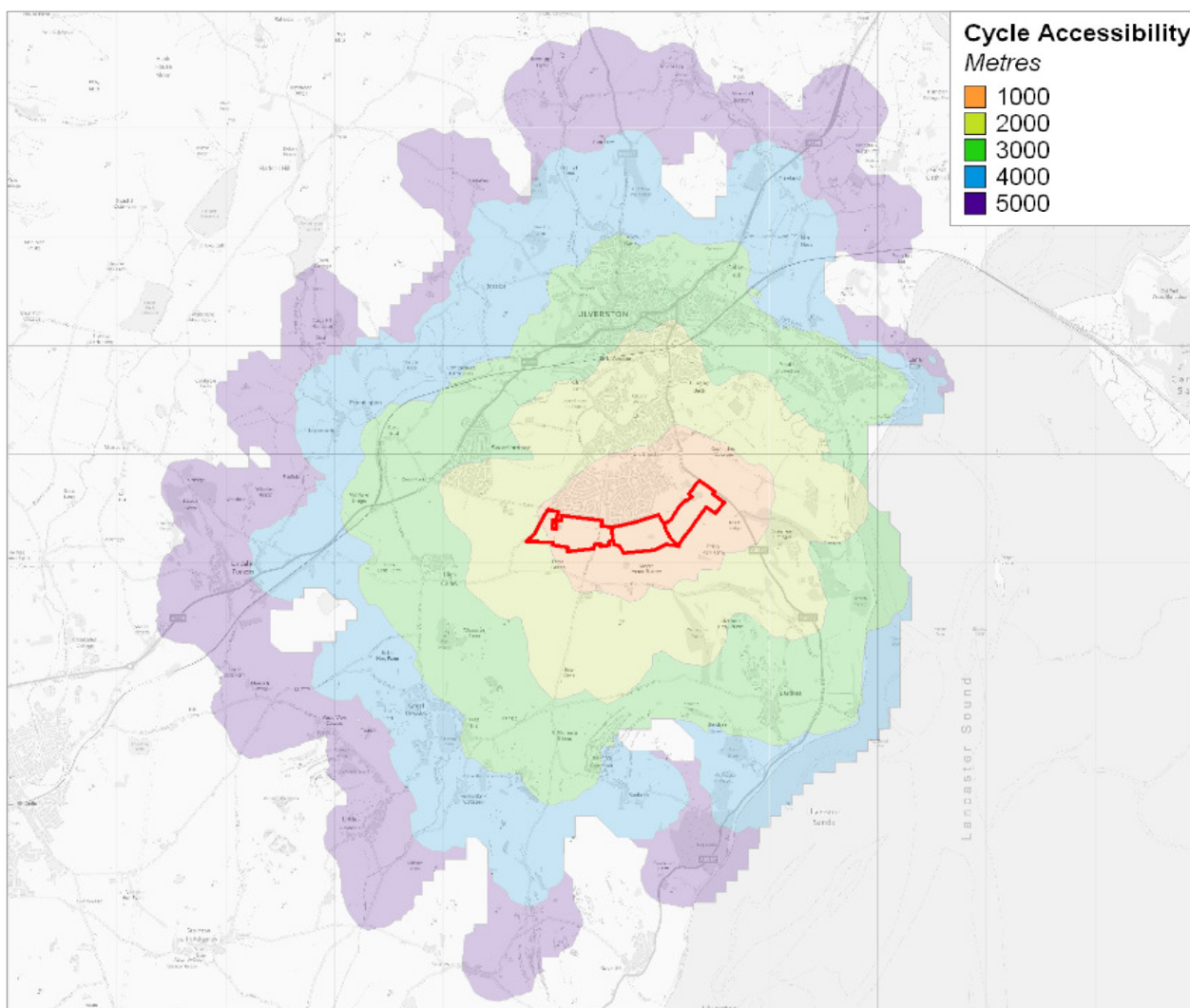
- 3.12 The main pedestrian / cycle desire line will be to the Ulverston in the north. There are good, well surfaced and street-lit footways on the majority of roads adjacent to the site and into Ulverston, particularly on the A5087 Priory Road and the residential cul-de-sacs off Birchwood Drive. A footway will also be introduced along Mountbarrow Road as part of the access strategy for the site.
- 3.13 The MfS states that walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, it goes onto state that this is not an upper limit and that walking offers the greatest potential to replace short car trips, particularly those under 2km (around a 25 minute walk).
- 3.14 The pedestrian accessibility of the development in relation to key facilities has been modelled using Geographical Information System (GIS) software. The purpose of the isochrones is to demonstrate the areas of the site which are within an acceptable walk distance of these key facilities, as shown on **Figure 3.3** below.

**Figure 3.3 – Pedestrian Accessibility**



- 3.15 The above demonstrates that southern parts of Ulverston are within acceptable walk distance from the site along with a number of key facilities such as primary and secondary schools, post office, supermarket, convenience store and Ulverston Railway Station.
- 3.16 Transport Policy identifies cycling represents a realistic and healthy option to use of the private car for making journeys up to 5000m as a whole journey or as part of a longer journey by public transport.
- 3.17 GIS software has been used to demonstrate the areas within an acceptable cycle distance of the site. The 5km cycle distance isochrones is shown on **Figure 3.4** below and highlights that Ulverston and surrounding areas are all accessible in this recommended distance. These locations provide numerous facilities and employment opportunities for residents of the site.

**Figure 3.4 – Cycle Accessibility**



## Public Transport Accessibility

- 3.18 As stated earlier, the nearest bus stops to the site are located on Birchwood Drive and Priory Road which results in a high proportion of the site falling within the recommended 400m to a bus stop. This could be improved further through the introduction of a new bus stop on Birchwood Road, as shown on **Figure 3.5** below.

**Figure 3.5 – Proposed Bus Accessibility Coverage**



- 3.19 The bus stops on Birchwood Drive and Priory Road are served by services 6 and 11 and whilst they provide access to key local destinations of Barrow-in-Furness and Ulverston, they do not operate at a high frequency. It is considered that the development will provide a financial contribution to either upgrading the frequency of the existing services or introduction of a new service.
- 3.20 As a high proportion of the site already falls within the recommended 400m walk distance to a bus stop there is no requirement to have buses entering the site. However, as detailed earlier, should this be required to deliver the Council's wider public transport objectives and improve public transport coverage in the area then the internal road network could be designed to accommodate buses, with a potential link being provided between the A5087 Priory Road and Mountbarrow Road, as shown on **Figure 3.2** earlier.

- 3.21 Ulverston Railway Station is located approximately 2km acceptable walk distance from the site. This Railway Station is located on the Furness Line providing direct access to Barrow-in-Furness and Lancaster.

**Summary**

- 3.22 Having regard to the analysis presented in this chapter, the site is considered to have a good level of existing accessibility which, in combination with the existing and proposed public transport facilities, will ensure that residents and visitors to the site have every opportunity to travel by sustainable modes of transport

## **4.0 OFF-SITE TRAFFIC IMPACTS**

### **Overview**

- 4.1 The operation of the local highway network and impact of the traffic generated by the DPD allocation sites has already been considered in a report prepared by KR Synergy (KRS's), dated February 2012. This report identified that although a number of junctions on the network are operating close to their capacity, the following locations are likely to encounter the most significant capacity issues in 2025:-
1. The A590 / Booths roundabout;
  2. The A590 / North Lonsdale Terrace; and
  3. The A590 / Quebec Street junction.
- 4.2 The KRS report concluded that irrespective of any future developments within or around Ulverston, the above junctions will be already be operating over their practical capacity during both the AM and PM peak hours.
- 4.3 Clearly the scale of developments proposed at Croftlands and Gascow Farm will generate a significant volume of trips during the AM and PM peak hours. The main routes to and from the site are north along Mountbatton Road and the A5087 Priory Road, therefore having the greatest impact at the A590 / Princess Street and the A590 / Quebec Street junctions in Ulverston.
- 4.4 The analysis presented in the KRS report indicates that the A590 / Princess Street junction will operate within capacity in 2025 with all DPD allocation sites in place. It is therefore unlikely that mitigation measures will be required at this junction. However, significant queues are forecast on Quebec Street arm of the A590 / Quebec Street junction in 2025 both with and without the DPD development sites in place. This is due to the high volume of traffic on the A590 and lack of gaps for vehicles exiting the minor arm of the junction.
- 4.5 It is understood that as part of the LDF process a community infrastructure levy (CIL) charging scheme will be introduced, with the timescales for adoption being September 2013. The aim of this CIL is to assist in managing the impacts of the proposals brought forward through the land allocations DPD.

- 4.6 The impacts of the development will be considered in detail at the planning application stage with the impacts mitigated through either the contributions provided to pre-identified highway improvement schemes in accordance with the CIL or, should the CIL not be in place, a package of off-site highway mitigation measures identified in the Transport Assessment that will support the application.
- 4.7 It should also be noted that given the high number of access options available to the site, it will enable flexibility in the design so that the development traffic can be evenly distributed on the local highway network, therefore minimising the impact of the development on key congestion points on the local highway network, particularly the A590 / Quebec Street.
- 4.8 Notwithstanding the above, a potential improvement scheme at the A590 / Quebec Street junction is discussed below.

#### **Potential Improvement Scheme**

- 4.9 The KRS report identified an improvement scheme at the A590 / Quebec Street junction which involves the introduction of traffic signals and reinstatement of the A590 to four lane operation.
- 4.10 SCP has reviewed these proposed measures and agrees with KRS's findings that an appropriate traffic signal layout can be achieved within the land available. Such a layout would have the added benefit of being able to improve pedestrian facilities across the A590. Whilst detailed capacity assessments are outside of the remit of this report, as the main issue with the existing junction layout is the significant queues on Quebec Street due to the lack of gaps in mainline traffic, the introduction of traffic signals will provide a significant improvement in this regard. At this stage, there are no reasons to believe that the impact of the development on the local highway network cannot be adequately mitigated.

#### **Travel Plan Measures**

- 4.11 A Travel Plan will be produced in support of the site, with the aim of reducing single occupancy car travel from the site helping to minimise the off-site traffic impacts of the development.
- 4.12 The Travel Plan will identify a number of 'hard' measures such as improvements to public transport services, cycle, and pedestrian infrastructure and 'soft' measures such as providing new residents with travel information packs which will provide details on walk / cycle routes and public transport services in the local area, the promotion of other initiatives such as walk / cycle 'budi' schemes, car sharing / car club schemes, personalised travel planning and promotion of home delivery services etc.

## **5.0 SUMMARY AND CONCLUSIONS**

- 5.1 SCP has been appointed by Lea Hough to provide specialist highways and transportation advice in relation to the promotion of land at Croftlands and Gascow Farm, Ulverston for residential development.
- 5.2 The development site is made up of three parcels of land referred to as Croftlands East, Croftlands West and Gascow Farm. The Croftlands East and Gascow Farm sites are estimated to provide in the region of 438 dwellings and the Croftlands West in the region 309 dwellings.
- 5.3 No constraints on vehicular access to the site have been identified with a high number of potential options being available from both the western, northern and eastern sides of the development site.
- 5.4 The site has been assessed in terms of its accessibility by walking, cycling, and public transport modes. The site is considered to have a good level of existing accessibility which, in combination with the existing and proposed public transport facilities, will ensure that residents and visitors to the site have every opportunity to travel by sustainable modes of transport.
- 5.5 In relation to public transport, a high proportion of the site falls within the recommended 400m to a bus stop which could be improved further through the introduction of a new bus stop on Birchwood Road. There is no requirement to have buses entering the site, however, should this be required to deliver the Council's wider public transport objectives and improve public transport coverage in the area then the internal road network could be designed to accommodate buses, with a potential link being provided between the A5087 Priory Road and Mountbarrow Road.
- 5.6 Should this option be progressed then careful design of the internal road network will be required in order to ensure that it can accommodate the movements of a bus, whilst at the same time discouraging the use of the route by general through traffic. The link through the housing parcels would therefore be designed to cater for bus movements but within a Manual for Streets context that allows for frontage development and caters for vulnerable road users consistent with the implementation of a 20mph zone.

- 5.7 A high level review of the off-site impacts of the development has been undertaken. The proposed development is likely to have the greatest impact at the A590 / Quebec Street junction which is already predicted to operate over capacity without the DPD sites in place. An improvement scheme at this junction has been identified and, at this stage, there are no reasons to believe that the impact of the development on the local highway network cannot be adequately mitigated.
- 5.8 Having regard to the analysis presented in this report, it is considered that there are no highway or transport reasons for why the land at Croftlands and Gascow Farm should not be included within the SLDC's DPD as a location for new development.

## ULVERSTON SOUTH

### GASCOW FARM– CROFTLANDS EAST

This document seeks to address the minor modification proposed by SLDC in relation to the LA1.3/LA5.2 Croftlands East allocation to the south of Ulverston.

The minor modification includes specific provision for a triangular area of land to be retained for surface water management, open space and access.

On behalf of the landowners, we would support the general approach taken by SLDC in relation to the allocation of the land between Priory Road and Mountbarrow Road. We understand more detailed representation will be made by others with regards the Nook Farm/Croftlands West allocation, but in principle we would also support this allocation.

The land between Mountbarrow Road and Priory Road to the south of Ulverston has provisionally been allocated for residential development in the Site Allocations DPD by South Lakeland District Council. This letter and accompanying reports have been produced with a view to demonstrating the deliverability of the site in the appropriate Plan period. Later in the document consideration is given to planning and technical constraints that exist on the allocated site whilst a headline appraisal of the site is also included.

## **OWNERSHIP**

Fundamental to the delivery of sites is a committed and proactive landowner who is willing to ensure that the site is available for the proposed allocated use within the relevant Plan period. The Crayston family own the entirety of the Gascow Farm allocation, as well as the two fields to the east of Mountbarrow Road. These two fields, along with the parcel of land that separates them from the Gascow Farm allocation, form the whole of the Croftlands East allocation of land. That land which is not controlled by the Crayston family is within the ownership of a third party, the Bowes family, whose longstanding interest in the land has been confirmed. As part of this exercise we have discussed the potential future uses of the land with both landowners and can therefore confirm that they are both committed to delivering the site forward for residential uses. There is an understanding between the parties that a significant amount of co-operation and understanding will be required in order to facilitate delivery and whilst it is premature for such an understanding to be in significant detail at this stage, both parties have indicated a willingness to negotiate on commercial terms in the future.

On behalf of the landowners we have therefore been instructed to demonstrate the site's deliverability highlighting both the technical achievability as well as the practical elements of developing the site.

## **SITE AREA**

As part of the SHLAA the entire site between Mountbarrow Road and Priory Road was measured at 26.6 ha (circa 66 acres). The SHLAA makes assumptions that suggest the Net Developable Acreage will be in the region of 50% and therefore a total of 13.3 ha (33 acres) is the currently expected yield from the site. This expectation results from concerns regarding the constraints that exist on the site.

Having considered the site further we believe that this assessment is likely to prove conservative in practice. Our opinion is that the development ratio is more likely to be in the region of 70%, or 45 net acres, and this submission demonstrates that the planning issues that have previously been cited as being the cause of the low site coverage can be adequately addressed through appropriate Masterplanning. The technical issues, detailed in the accompanying reports, demonstrate that from a highways and drainage perspective, solutions exist that are within normal development tolerances and do not require significant areas of the site to be set aside.

For the purposes of viability, we have considered the 50% Net Developable Acreage ratio to ensure the site is robust in terms of its financial viability and confirm the site can be delivered on such a coverage.

This potential increase in the net developable acreage of the site further enhances its viability credentials.

## **OVERVIEW OF CONSTRAINTS**

A Constraints and Opportunities Assessment has previously been prepared on behalf of the landowners by Cass Associates and this document was submitted to the Inspector prior to the examination. Further work in relation to the surface water and highways arrangements has also been procured and is included in this package.

## **PLANNING CONSTRAINTS**

The Cass document highlighted the following constraints as being in need of consideration.

- Water main/aqueduct

- Protecting the setting of the existing farm buildings
- Topography
- Sensitivity of the existing neighbours
- Appropriate interface with the existing built community and the countryside to the south.

The document includes a sketch masterplan of the land between Priory Road and Mountbarrow Road. This indicative plan demonstrates the potential approach to addressing the constraints identified. Appropriate buffer zones and POS locations can be incorporated into the masterplan to ensure the development sits well when adjoining local third party land. In addition the aqueduct can be utilised as, whilst not able to accommodate built development, a road corridor along with potential SUDS features and services strip can be delivered on its footprint. Indeed, the line of the aqueduct also presents the opportunity to create a linear green space as well as a suitable link between Priory Road and Mountbarrow Road.

The existing farm buildings at Gascow Farm are reasonably substantial but are not in themselves particularly noteworthy. The existing agricultural buildings would be most likely demolished and removed whilst the farmhouse should be able to be incorporated into a future development scheme. Within the main farmyard is a large stone barn which, though it is not protected by a listing or similar conservation status, should be considered as an asset that is worth further consideration in terms of its future retention.

The topography of the site is such that parts of the future development may require some forms of retention and similar development features. The land rises from Priory Road and isolated parts of the most westerly point of the Gascow Farm allocation are reasonably steep. The Croftlands East allocation is reasonably rolling in character and the topography there is not considered to be a particular impediment to development. Indeed, even the steepest aspects of the Gascow Farm

allocation are not in themselves undeliverable and those sections that may require engineering solutions are certainly capable of being included within a wider development scheme.

The incorporation of the aforementioned buffer zones and POS, as well as the service corridor over the aqueduct, will help ensure that the future development is attractive to potential future residents. It will also ensure that the interface between the new southern edge of Ulverston and the adjoining open countryside to the south can be more effectively integrated into any future scheme. As above, we believe that the 50% allowance for non-developable areas is particularly conservative; however, even with a higher site coverage we believe the development is still able to ensure that the appropriate level of green space is maintained and the important views into and from Ulverston are preserved.

## **SURFACE WATER DRAINAGE**

South Lakeland District Council have made it clear that they consider the surface water drainage solutions on the wider allocation to the south of Ulverston as being of paramount importance. As such the landowners have instructed Integra, a drainage consultant, to provide an assessment of the site and the likely future needs and strategy to accommodate a residential development. That report is included in this submission.

Fundamentally, the surface water drainage issues can be accommodated on the site, without the need for third party land. The topography of the allocation lends itself well for an appropriate drainage scheme, whilst the green field nature of the entire allocation will require run-off rates to be maintained at the present green field rate. This will require some attenuation at key points across the allocation and we would consider that the POS and buffer zones within the site are in appropriate locations to incorporate these.

Each portion of the allocation should be able to appropriately attenuate down to green field run-off rates before discharging to adjacent land. The landowners between Mountbarrow Road and Priory Road understand that some co-operation on this issue may be required. Importantly, the owners of Gascow Farm are aware that they may need to accommodate some additional surface water attenuation adjacent to Priory Road (i.e. the lowest part of the allocation) to facilitate development elsewhere and they have confirmed that they are prepared to do so if required. However, Integra have advised that this scenario is unlikely to be required as the attenuation needs of the site should be capable of being met more evenly across the allocation.

It is understood that the Croftlands West allocation may require a more significant form of surface water attenuation and that this may necessitate the use of the Crayston field to the east of Mountbarrow Road. It is understood that this field not only sits in an ideal location for attenuation but also provides access to the current surface water/foul combined sewer. The Craystons, and indeed the landowners from Mountbarrow Road to Priory Road, are willing to enter into commercial negotiations with the owners of Croftlands West to ensure that, if necessary, part of their site can be used for attenuation. If there is also a requirement to lay separate surface water and foul drainage across the development site in order to serve the Croftlands West allocation the landowners will endeavour to reach an agreement in due course. Fundamentally, there is commitment on behalf of our clients that the whole southern belt of land is deliverable for residential use and they are prepared to work to reach a prudent and appropriate solution for all parties to achieve this.

Integra have also confirmed that the Surface Water Strategy required for the strategic allocation to the south of Ulverston can be accommodated by standard development solutions. These may include attenuation and SUDS features in addition to

engineered infrastructure solutions (i.e. oversized pipes), but surface water is not considered to be an issue that would significantly affect the viability of the site.

Furthermore, the requirement within the modification for a large triangular area to be left undeveloped for surface water purposes is considered unnecessary by the landowners and their drainage consultants. The use of typical sustainable development techniques would more than adequately ensure a robust and appropriate treatment for surface water issues is achieved on site.

## **HIGHWAYS**

The landowners have also instructed SCP Highway Engineers to provide an overarching assessment of potential highways impact of the site to support the allocation of the site for residential use. This report is included in this submission. In summary it is considered that the Gascow Farm site provides direct access onto Priory Road and is immediately deliverable. There are no immediate junctions that need to be reviewed, although consideration may need to be given as part of a more strategic review along the A590 corridor. It is expected that the bulk of traffic emanating from the site will have dissipated before reaching any particular junctions, highways or corridors of concern.

Consideration has been given to providing a "bus-proof" corridor through the site in order to improve the sustainability of the location. This type of route can be accommodated, particularly using the aqueduct as a key linkage/service corridor but it is noted that any future road need not be of particular strategic importance. SCP do not consider there to be any particularly need for a major distributor road between Priory Road and Urswick Road and therefore any proposed bus link could be accommodated on "normal" development roads. As such, the impact of such a linkage on the development cost of the site is likely to be minimal.

An indicative assessment of the site junction costs have been provided by SCP and these broadly accord with the AECOM report commissioned by the Local Authority.

## **MODIFICATIONS**

The minor modification includes specific provision for a triangular area of land to be retained for surface water management, open space and access.

As demonstrated by this submission and the technical reports that accompany it, withholding the land within the development for such uses is unnecessary.

The surface water can be dealt with using more typical development techniques and a suitably designed SUDS approach.

The site's on-site open space can be accommodated appropriately using the design approach identified within the CASS Constraints and Opportunities document. The existing aqueduct easement can be incorporated to provide both a service corridor and a linear open space feature to connect the sites, ensuring a more economical, efficient and logical use of the constraints that exist.

Whilst the identified area could be used as core green space, and there are sound planning reasons for utilising it so, the extent of the area, and restrictions implied by the modification, is considered by the landowners to be excessive and unnecessary for the future development of the land.

In the event it is considered necessary to retain the designated triangular area it is suggested that it would be prudent to explicitly reference its presence as precautionary and its extent as indicative. It would be inappropriate to impose an unnecessary requirement and prescribe the extent of its area as this time, thereby precluding the application of a flexible approach in the future at the detailed design

stage when the development coverage and the required response to technical issues become more apparent.