

Keyland Developments Limited
Western House
Western Way
Halifax Road
Bradford
BD62SZ

22 September 2015

robert.greenwood@sandersonassociates.co.uk
By Email only

Our ref : 8880-001

For the attention of Matthew Naylor

Dear Matthew

Halifax Road Hartshead Moor Top

I refer to our discussions with respect to the above and thank you for your instruction to provide advice on highway issues on this project. I would now set out our findings on access arrangements to the site following our site visit and radar speed survey.

The application site lies between 1056 and 1060 Halifax Road and is part of an operational YW reservoir site. Access to the site will be via the existing vehicular access to the reservoir which lies directly to the north. The access has junction kerb radii and is approximately 4.1m wide with security gates set back a relatively short distance from the near kerb line. As you confirmed, this access is very occasionally used and only by maintenance vehicles visiting the reservoirs.

Opposite the site entrance Halifax Road, the principal road, A649, has a carriageway width of approximately 10.3m with a near footways of 1.9m set behind a low inclined margin of approximately 0.6m which separates it from the carriageway. A wide verge lies opposite the site on the southern flank of the route.

Traffic speed on this section of the A649 is subject to a 40 mph limit, street lighting is provided to main road standards, and there are no restrictions to on street parking or loading. To the east of the site the A649 bends in a slight southerly direction and becomes a dual carriageway for a short section at its junction with the A643 principal road and as it crosses over the adjacent M62 Motorway.

The proposed development comprises of 4 dwellings set out around a private driveway. The driveway joins the existing access road approximately 5m along its length and as part of the development the access will be improved in width to 4.5m and by the provision of a footway on its eastern flank leading from the public footway of Halifax Road into the site.

The proposed dwellings all lie in close proximity to Halifax Road and, as with existing adjacent dwellings, service and emergency access will be via Halifax Road. The service vehicle that will most regularly the site will be the refuse vehicle and to accommodate refuse bin collection a surfaced bin collection point has been provided adjacent to the access to prevent over spill of bins on collection day on the nearside footway of Halifax Road.

By reference to the TRICS data base for residential development of this scale the proposal would generate around 4 vehicle movements in the peak hours, with approximately 28 trips in an 18

hour period. In relation to sustainability, public passenger bus stops lie at approximately 300m from the site and local facilities within Scholes village lie at 1.4km distant from the site as a measured walking path.

To determine the suitability of the access to Halifax Road a radar speed survey of traffic was carried out on 7 September 2015. The speed survey was undertaken out of peak hours and in free flowing conditions. Derived 85th percentile wet weather speeds on Halifax Road were recorded as 39 mph southbound and 42mph north bound.

As such sight line standards would be drawn from *Manual for Streets* (39 mph) and the *Design Manual for Roads and Bridges* (42 mph), requiring 2.4 x 63 and 120m respectively. These distances are measured at the accepted urban set back of 2.4m and include the "bonnet length of 2.4m of the approaching vehicle.

Layout plan reference 0504 SK -01B attached, indicates that because of the layout and alignment of Halifax Road this level of vision can be provided, with in practice vision to oncoming traffic exceeding the required standard in either direction. As will be noted visibility to the left on exit is measured to the opposing overtaking traffic lane, as this forms part of the separated lanes of the dual carriageway and is the "worst case".

An initial search of Police recorded road traffic accidents using the internet source Crashmap has been undertaken which indicates that during the 5 year period 2010 to 2014 there have been no accidents at the site entrance or along its frontage to Halifax Road.

As mentioned previously the level of existing traffic using the reservoir access is very light and occasional and to ensure minimal conflicts with the proposed development the security gates to the reservoir site are to be relocated well back from the private drive entrance as indicated on Layout plan reference 0504 SK -01B.

In conclusion the site lies within accepted walking distance of local facilities and public transport is available, the access to Halifax Road is designed to accommodate the traffic associated with the development and is compliant with normal design standards. The level of traffic generated by the development is very low and will have no adverse material impact on the operation of Halifax Road or adjacent side road junctions.

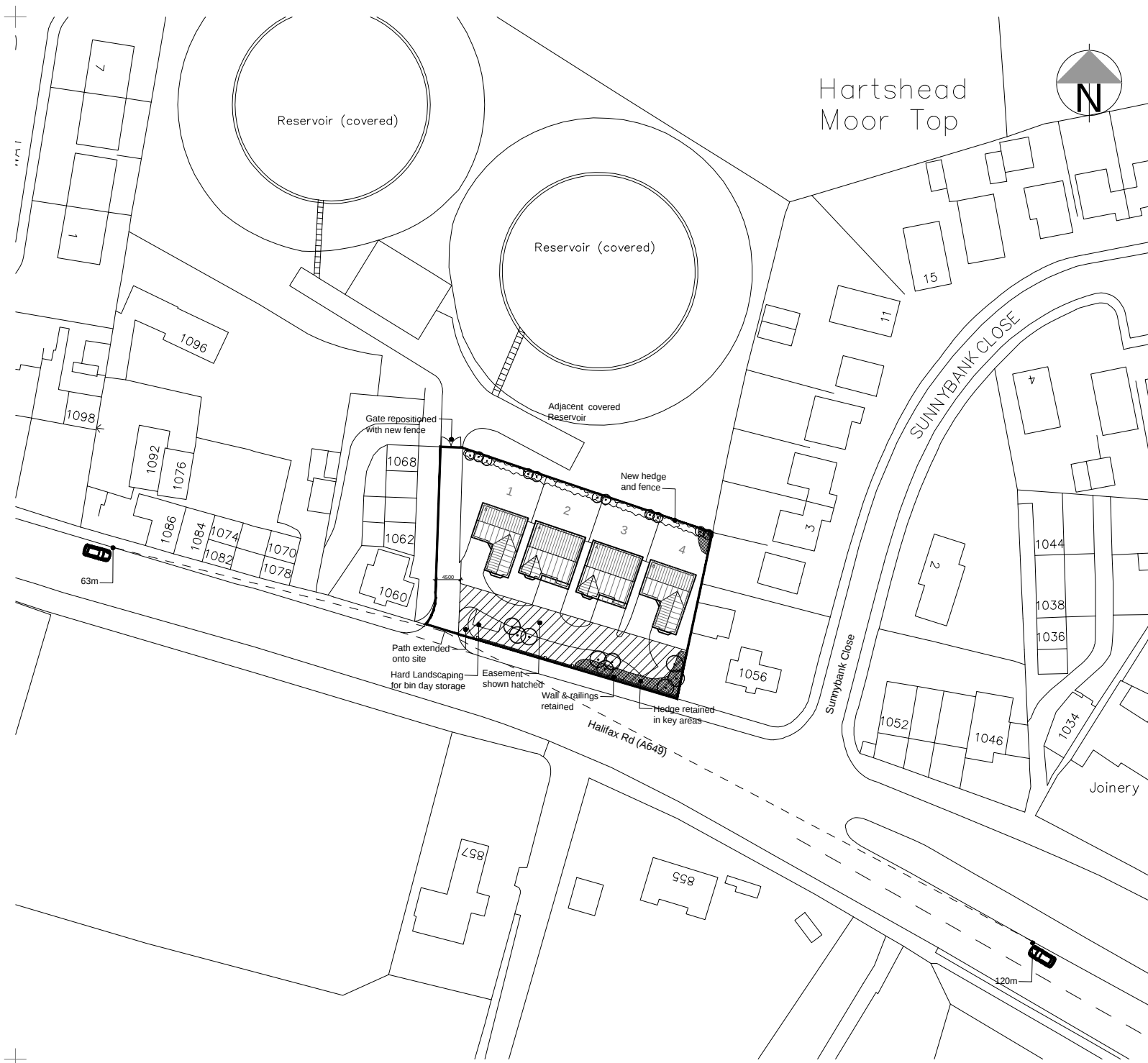
As such it is considered that the proposal is compliant with the highway policies contained in the National Planning Policy Framework and there is no highway reason why consent should not be forthcoming.

Yours sincerely



Robert Greenwood I Eng. FIHE
Associate Director

Enclosure radar speed survey results and site layout plan.



Notes:
Sketch schemes may be based on plan information of unknown origin and is subject to verification and survey.
Contractors must verify all dimensions on site before commencing any work or shop drawings.
This drawing is not to be scaled. Use figured dimensions only.
Ensure digital versions are plotted at 'Actual Size'.
Building areas are liable to adjustment over the course of the design process due to ongoing construction detailing developments.
Subject to statutory approvals and survey.
The bar below is to check that the drawing has been printed to scale.



Accommodation Schedule				
House Type		Area (sq.ft)	Quantity	Total Areas (sq.ft)
A	4 bed detached, integral garage	1,500	2	3,000
B	4 bed detached, integral garage	1,300	2	2,600
Total			4 No.	5,600 sq.ft
Site Area			0.358 Acre	

B	Sight line added and bin storage added	16.09.15	YA
A	Amendment to boundary line	12.08.15	YA

Status Project Status

Project
Hartshead Moor Top

Client
Keyland Developments Ltd

Drawing
Sketch Site Layout Plan

Date	Project No	Drawing Number
09.06.15	0504	SK-01B

Scale (A4 Sheet)

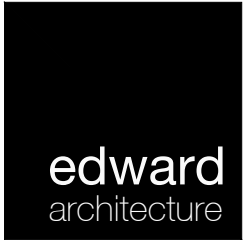
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Drawn By

YA

Checked By

GE



Speed Meter Reading - Results

Location A 649, Heartshead Moor
Direction of Travel North Bound

Job Number 8880
Date of Survey 07/09/15
Start Time 13:16
Finish Time 14:09

Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings
1		26		51		76	
2		27		52		77	
3		28	1	53		78	
4		29	1	54	1	79	
5		30	2	55		80	
6		31	3	56		81	
7		32	3	57		82	
8		33	3	58	1	83	
9		34	8	59		84	
10		35	5	60		85	
11		36	11	61		86	
12		37	6	62		87	
13		38	7	63		88	
14		39	3	64		89	
15		40	6	65		90	
16		41	6	66		91	
17		42	8	67		92	
18		43	6	68		93	
19		44	9	69		94	
20		45	4	70		95	
21		46	1	71		96	
22		47	1	72		97	
23		48	2	73		98	
24		49	1	74		99	
25		50		75		100	

Number of Readings = 99

Dual C'way Y/N? n

Mean Speed = 38.979798

Single C'way Y/N? y

Standard Deviation = 5.3145541

Wet Road Surface Y/N? n

85 Percentile Speed = 44.294352

85 Percentile Wet Weather Speed = 41.809352 <<<<

Note: Insert Y or N in boxes against carriageway type and road surface condition and then use 85 percentile speed as marked with <<<<.

Speed Meter Reading - Results

Location A 649, Heartshead Moor
 Direction of Travel South Bound

Job Number 8880
 Date of Survey 07/09/15
 Start Time 13:16
 Finish Time 14:11

Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings	Speed	No. of Readings
1		26		51		76	
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30	1	55		80	
6		31	9	56		81	
7		32	10	57		82	
8		33	4	58		83	
9		34	6	59		84	
10		35	5	60		85	
11		36	11	61		86	
12		37	11	62		87	
13		38	8	63		88	
14		39	8	64		89	
15		40	5	65		90	
16		41	2	66		91	
17		42	6	67		92	
18		43	8	68		93	
19		44	2	69		94	
20		45	1	70		95	
21		46		71		96	
22		47	3	72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	

Number of Readings = 100

Dual C'way Y/N? n

Mean Speed = 37.11

Single C'way Y/N? y

Standard Deviation = 4.2495276

Wet Road Surface Y/N? n

85 Percentile Speed = 41.359528

85 Percentile Wet Weather Speed = 38.874528 <<<<

Note: Insert Y or N in boxes against carriageway type and road surface condition and then use 85 percentile speed as marked with <<<<.