

## **PROPOSED RESIDENTIAL DEVELOPMENT,**

### **HADRIAN'S CAMP**

#### **SITE ACCESS REVIEW – NOVEMBER 2015**

## **1 INTRODUCTION**

- 1.1 Vectos has been commissioned by North Associates to provide a review of access options to a residential site at Hadrian's Camp, Houghton in Cumbria. The site is located approximately 4.5km to the north west of Carlisle and has previously served as a military training camp.
- 1.2 Story Homes have recently been approved consent for 90 dwellings on part of this area. The layout for the approved Story Homes application is presented as **Dwg CPT-197-PL-02** and this includes a new give way junction onto Houghton Road. Our client has reserved access over the Story Homes land.
- 1.3 This report assesses the access potential to serve an additional 300 dwellings using the Houghton Road Access supported by an EVA off Centurions Way. This figure of 300 dwellings includes a 50 dwelling extension of the Story Homes sites described as Phase 1b. The general masterplan showing the approved site (A) the Phase 1b sites (B&C) and the wider development is shown in **Plan 1**.
- 1.4 Within this review we have considered CCC and DfT Highway Design Guidance, Manual for Streets as well as other industry standard design guides.
- 1.5 This review considers the capacity of the access onto Houghton Lane, the need for an Emergency Vehicle Access and finally the benefits of the site for access by non car modes.

## **2 SITE ACCESS ONTO HOUGHTON ROAD**

- 2.1 As a military training camp the site previously benefitted from an access onto Houghton Road. Story Homes have gained planning approval for access to the residential development at the same location as the existing access. The use of that Houghton Road access represents the optimum access location for further development on the site.
- 2.2 The new access onto Houghton Road that has been designed and approved by CCC highways officers to serve the Story Homes Site. It benefits from good visibility and during discussions with the highways officers on the design of that access, consideration was given to the potential of that access to serve additional dwellings so that the highway design did not present a constraint to further development.

- 2.3 During those discussions, it was agreed with highways officers that there was no requirement for a right turn ghost island. Vectos then prepared traffic capacity models of the Houghton Road access and how it would operate with the full development.
- 2.4 The forecast operation using the Industry Standard PICADY model at a 2020 future year AM peak shows that the junction operates at a maximum of 30% of its capacity. The average queues are no greater than one vehicle in length and the delay for traffic leaving the site is no more than 13 seconds at the busiest time for right turners. In summary this junction can easily cater for the full development without any material queues or delays.

### **3 NEED FOR EMERGENCY VEHICLE ACCES**

- 3.1 Subject to confirmation by the local Fire Officer, it is expected that the full development would require an Emergency Vehicle Access (EVA).
- 3.2 Centurion's Walk offers the optimum location for an EVA and this could also provide a pedestrian link which helps connectivity for the site and existing residents off Brampton Old Road. The location of this EVA is shown in **Plan 2**.
- 3.3 Centurion's Walk previously provided access to the former Army Camp and it is our understanding that there is no impediment to Centurion's Walk being used as an EVA.
- 3.4 This EVA link could be a joint footway/cycleway at a width of 3.7m controlled by lockable bollards. Centurion's Walk is not adopted but the client benefits from access rights. There is no requirement to change the nature of Centurion's Walk with its use as an EVA.

### **4 ACCESS ON FOOT AND BY PUBLIC TRANSPORT**

- 4.1 Manual for Streets (MfS) promotes the need for connectivity with neighbouring urban areas, and emphasising the importance of a permeable and walkable neighbourhood. This development provides the opportunity to link the residents of Centurion's Walk on Brampton Old Road with Houghton to the north allowing residents to access the amenities in a more direct and sustainable manner.
- 4.2 There is an hourly bus service on Houghton Road with bus stops close to the site access provided as part of the Story Homes planning conditions. Further development of the site would strengthen the passenger demand for that service to and from Carlisle thereby helping secure the services viability.

## **5 SUMMARY AND CONCLUSION**

- 5.1 This Access Review has demonstrated that there are no highways or transportation constraints to the further development of residential dwellings at Hadrian's Camp, Houghton.
- 5.2 There is already an existing access that serves the first phase of development of 90 units by Story Homes. The full development of the site will result in a further 300 dwellings. It is proposed that this extended development be accessed from the upgraded junction on Houghton Road prepared in support of the first phase of the Story Homes development with an Emergency Vehicle Access available via Centurions Walk.
- 5.3 During the discussions with highways officers for the first phase Story Homes development, it was agreed that the highway design should not offer any constraint to further development. The upgraded access junction has been approved by CCC Highways officers, it meets the visibility criteria and would operate in a safe manner. Traffic modelling has shown that it accommodate a full development of a further 300 dwellings and operate at round 30% of its capacity with only no material queues or delays.
- 5.4 An Emergency Vehicle Access is expected to be required and the route via Centurion's Walk offers the logical solution as this route provided a former access into the military camp. This would be controlled by lockable bollards and also offer a pedestrian route into the site. No changes are proposed to Centurion's Walk.
- 5.5 The development of the site offers a comprehensive footpath network linking the residents on Brampton Old Road with an alternative link to Houghton itself. The further development of the site will also help support the viability of the existing bus services that stop close to the new site access.
- 5.6 In conclusion there are no highways or transport constraints to the further development of Hadrian's Camp.





**SCHEDULE OF ACCOMMODATION - OVERALL**

Room	Access	Room No.	Area (sqm)	Vol (cu m)	Room No.	Area (sqm)	Vol (cu m)
W1	WATER	1	100	0	1	100	0
W2	WATER	2	100	0	2	100	0
W3	WATER	3	100	0	3	100	0
W4	WATER	4	100	0	4	100	0
W5	WATER	5	100	0	5	100	0
W6	WATER	6	100	0	6	100	0
W7	WATER	7	100	0	7	100	0
W8	WATER	8	100	0	8	100	0
W9	WATER	9	100	0	9	100	0
W10	WATER	10	100	0	10	100	0
W11	WATER	11	100	0	11	100	0
W12	WATER	12	100	0	12	100	0
W13	WATER	13	100	0	13	100	0
W14	WATER	14	100	0	14	100	0
W15	WATER	15	100	0	15	100	0
W16	WATER	16	100	0	16	100	0
W17	WATER	17	100	0	17	100	0
W18	WATER	18	100	0	18	100	0
W19	WATER	19	100	0	19	100	0
W20	WATER	20	100	0	20	100	0
W21	WATER	21	100	0	21	100	0
W22	WATER	22	100	0	22	100	0
W23	WATER	23	100	0	23	100	0
W24	WATER	24	100	0	24	100	0
W25	WATER	25	100	0	25	100	0
W26	WATER	26	100	0	26	100	0
W27	WATER	27	100	0	27	100	0
W28	WATER	28	100	0	28	100	0
W29	WATER	29	100	0	29	100	0
W30	WATER	30	100	0	30	100	0
W31	WATER	31	100	0	31	100	0
W32	WATER	32	100	0	32	100	0
W33	WATER	33	100	0	33	100	0
W34	WATER	34	100	0	34	100	0
W35	WATER	35	100	0	35	100	0
W36	WATER	36	100	0	36	100	0
W37	WATER	37	100	0	37	100	0
W38	WATER	38	100	0	38	100	0
W39	WATER	39	100	0	39	100	0
W40	WATER	40	100	0	40	100	0
W41	WATER	41	100	0	41	100	0
W42	WATER	42	100	0	42	100	0
W43	WATER	43	100	0	43	100	0
W44	WATER	44	100	0	44	100	0
W45	WATER	45	100	0	45	100	0
W46	WATER	46	100	0	46	100	0
W47	WATER	47	100	0	47	100	0
W48	WATER	48	100	0	48	100	0
W49	WATER	49	100	0	49	100	0
W50	WATER	50	100	0	50	100	0
W51	WATER	51	100	0	51	100	0
W52	WATER	52	100	0	52	100	0
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W57	WATER	57	100	0	57	100	0
W58	WATER	58	100	0	58	100	0
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W83	WATER	83	100	0	83	100	0
W84	WATER	84	100	0	84	100	0
W85	WATER	85	100	0	85	100	0
W86	WATER	86	100	0	86	100	0
W87	WATER	87	100	0	87	100	0
W88	WATER	88	100	0	88	100	0
W89	WATER	89	100	0	89	100	0
W90	WATER	90	100	0	90	100	0
W91	WATER	91	100	0	91	100	0
W92	WATER	92	100	0	92	100	0
W93	WATER	93	100	0	93	100	0
W94	WATER	94	100	0	94	100	0
W95	WATER	95	100	0	95	100	0
W96	WATER	96	100	0	96	100	0
W97	WATER	97	100	0	97	100	0
W98	WATER	98	100	0	98	100	0
W99	WATER	99	100	0	99	100	0
W100	WATER	100	100	0	100	100	0

Gross Site Area in Meters: 47200  
 Gross Site Area in Acres: 11.69  
 Strategic Public Open Space in Meters: 8122.306  
 Strategic Public Open Space in Acres: 2.02  
 Net Site Area in Meters: 39077.694  
 Net Site Area in Acres: 9.41  
 Net Site Area in Hectares: 2.81  
 Density (SI/F per Acre): 12071  
 Density (Units Per Acre): 11  
 Density (Units Per Hectare): 28.08

**AVAILABILITY OF SERVICES**  
 (S) SERVICES PROVIDED BY LOCAL AUTHORITIES  
 (P) SERVICES PROVIDED BY PRIVATE SUPPLIERS  
 (R) SERVICES PROVIDED BY RESIDENTS  
 (A) SERVICES PROVIDED BY ACCOMMODATION PROVIDERS

DRAWING NO. 10/20/2014  
 DRAWN BY: G. CLARKE  
 CHECKED BY: G. CLARKE  
 DATE: 10/20/2014

CONCEPT  
 ARCHITECTS



# PLAN 1



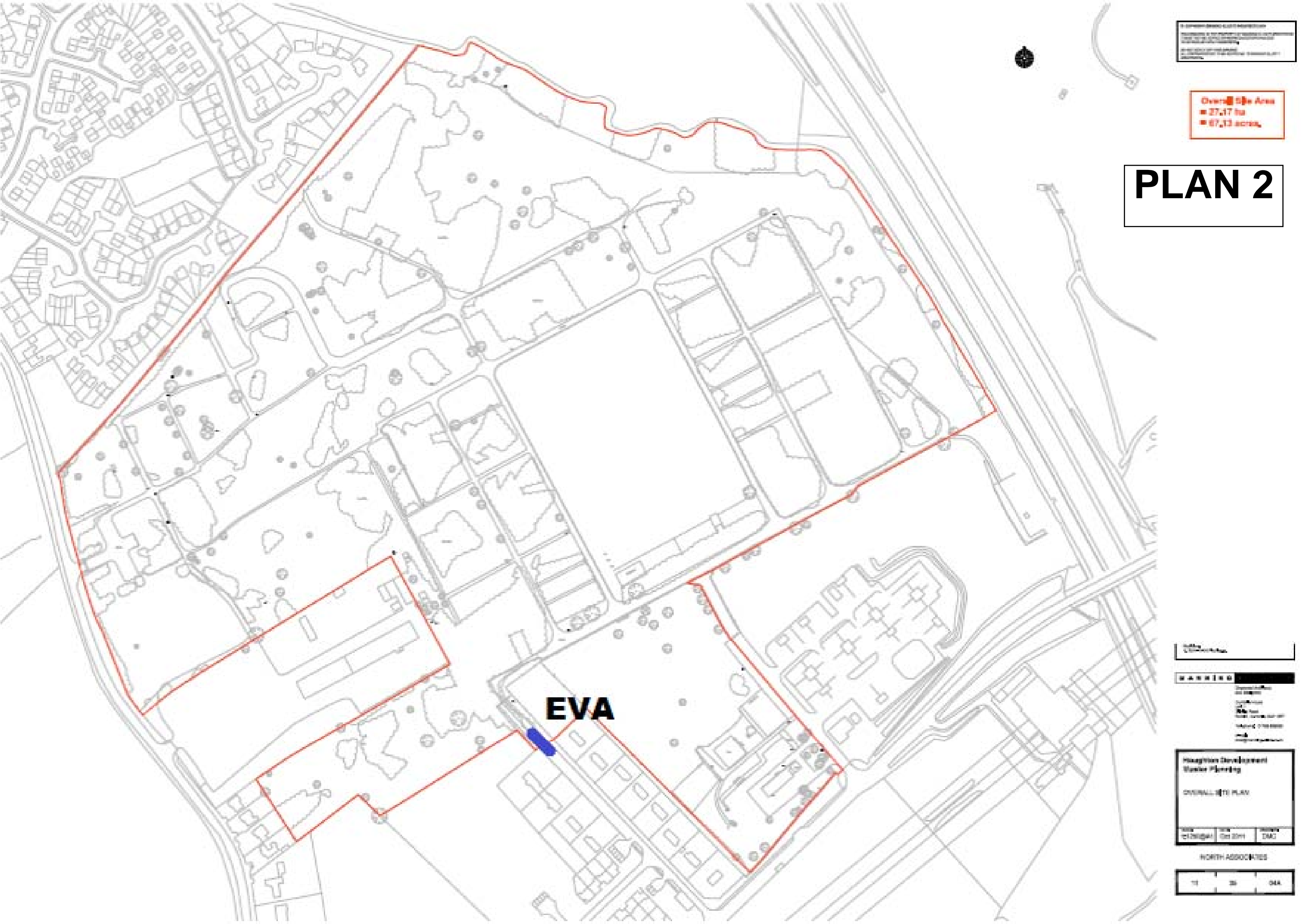
Housing by another  
developer

C

B

A





1. OVERALL SITE PLAN  
2. OVERALL SITE PLAN  
3. OVERALL SITE PLAN  
4. OVERALL SITE PLAN

Overall Site Area  
■ 27.17 ha  
■ 67.13 acres

# PLAN 2

DATE: 12/20/2011

- Overall Site Area
- Overall Site Area
- Overall Site Area
- Overall Site Area
- Overall Site Area
- Overall Site Area

Neighborhood Development  
Master Planning  
OVERALL SITE PLAN  
DATE: 12/20/2011  
BY: DMG

NORTH ASSOCIATES  
11 20 04A