



Ref: A094060

Date: 26th August 2015

Mr Tom Woof

H&H Land and Property
Borderway
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Dear Tom

Land North of Crindledyke Lane, Carlisle, Cumbria - Transport Appraisal

I write with my transport appraisal support promotion of a potential development site on land north of Crindledyke Lane in Carlisle, Cumbria. It is considered, that the development site could accommodate circa 75 homes.

Local Transportation Networks

The development is located to the north-west of Carlisle between Kingmoor Park and Kingmoor Marshalling Yard. The site is currently used for agricultural purposes. Figure 1 (attached) shows the location of the development site in context to the wider area. The site is bounded to the north, east and west by agricultural land and to the south by Crindledyke Lane and the Story Homes' Crindledyke Farm residential development, which is currently under construction. This development includes a local centre and primary school.

The site has frontage onto Crindledyke Lane, which runs from an eastern priority junction with Parkhouse Road on an east to west alignment up to Low Crindledyke and the West Coast Main Line (WCML) where it deviates sharply to the north past Kingmoor to form a western priority junction with Parkhouse Road at Harker Road Ends. Between Parkhouse Road and access to the Crindledyke Farm development Crindledyke Lane has been improved to provide a 6m wide carriageway and a 2.5m wide shared foot/cycleway on to the south. The north side is a grass verge. Street lighting has been introduced and the 30mph speed limit extended. To the west of the access to Crindledyke Farm the road remains a country lane with no footways or street lighting.



As part of the Crindledyke Farm development eastern priority junction with Parkhouse Road will be upgraded to traffic signal control.

Parkhouse Road links the A7 Kingstown Road with the northern part of Kingstown Industrial Estate, along with the villages of Cargo and Rockcliffe. It is generally 7.5m wide in the vicinity of Kingmoor Park, with a footway along the south-west side and is subject to a 40mph speed limit.

Parkhouse Road provides convenient eastward connections to Kingmoor Park, Kingstown Industrial Estate, ASDA and other retail and DIY stores. It links to the A689 Carlisle Northern Development Route for access north to the M6 at Junction 44, east to Brampton, and south to west Carlisle and the A595. Parkhouse Road ends at the junction with the A7 Kingstown Road which gives access to Carlisle city centre.

Access

Crindledyke Lane will form the main access to the site for vehicles, pedestrians and cyclists. Drawing A094060/C001, attached, shows the potential arrangement of the site access in the format of a simple priority T-junction with the associated visibility splays.

Following the guidance in the Manual for Streets visibility splays of 2.4m by 40m, which are suitable for 30mph speeds can be provided, but the available visibility from the access is much greater at 90m to the east and 90m to the west. The access road comprises a 5.5m wide carriageway with a 1.8m footway to each side and 6m kerb radii at the access junction based on the Major Access Road parameters in the Cumbria Design Guide Vol 1, 1996.

In principle a safe and satisfactory access to Crindledyke Lane can be provided and, as part of subsequent planning stages, the precise arrangement would be agreed with Cumbria County Council.

Traffic Generation

The vehicular trip rates have been derived from TRICS database and are summarised in Table 1 below together with eh generated traffic from 75 homes. The rates used are similar to those agreed with Cumbria CC at recent residential sites at Greymoorthill (A7/ Parkhouse Road junction) and at Windsor Way.



Table 1: Crindledyke Farm Development Trip Rates and Predicted Generated Trips

| Time Period | Arrivals | | Departures | |
|--|------------|-------|------------|-------|
| | TRICS Rate | Trips | TRICS Rate | Trips |
| Car Driver Trips | | | | |
| Weekday AM Peak Hour 08:00 to 09:00 | 0.171 | 13 | 0.450 | 34 |
| Weekday PM Peak Hour 17:00 to 18:00 | 0.433 | 32 | 0.235 | 18 |

Trip rates are per dwelling

The development is predicted to generate 47 vehicle movements during the AM peak hour and 50 vehicle movements in the PM peak. Those numbers are such that any planning application should be supported by a Transport Assessment.

Traffic Assignment

Traffic generated by the proposed development has been assigned as per the agreed assignment from The Transport Assessment produced in support of the Crindledyke Farm development. This assumed that all development traffic will access the site via the eastern Parkhouse Road/ Crindledyke Lane junction and at this junction development traffic would split broadly 90% to/ from the east and 10% to/ from the west. Figure 2 And 3, attached, show the AM and PM development generated traffic flows from Table 1.

Traffic Impacts

The proposed development generates a small additional flow on Crindledyke Lane and no adverse impact is anticipated.

As part of Crindledyke Farm development it is proposed to signalise the Parkhouse Road / Crindledyke Lane junction. The LINSIG modelling work carried out by WYG in 2012 (Table 7.3 of the TA, attached shows that the proposed junction operates well within capacity with small queues and limited delays. During the AM peak period in 2020 Crindledyke Lane was predicted to operate with a queue of 8 vehicles and average of delay of 20 seconds per vehicle, and a queue of 6 vehicles and average of delay of 26 seconds per vehicle during the PM peak.

The potential development of land north of Crindledyke Lane would increase the traffic flows at the junction by approximately 1 vehicle per cycle in both the AM and PM peak periods as such is considered that the traffic generated by the development would have no material impact upon the operational performance of the junction, however the operational performance of the junction will be considered in detail as part of a Transport Assessment during subsequent planning stages.



Summary and Conclusions

This appraisal has concentrated on the following issues:

- 1) Access; Suitable access arrangements for vehicles, pedestrians and cyclists can be provided on Crindledyke Lane
- 2) Traffic Impacts; the development proposal is predicted to generate relatively small numbers of vehicle trips which can be readily accommodated on Crindledyke Lane and at the Parkhouse Lane junction. No mitigation measures are anticipated at this stage.

The proposed development site is therefore considered suitable in transportation terms for residential development.

Yours sincerely

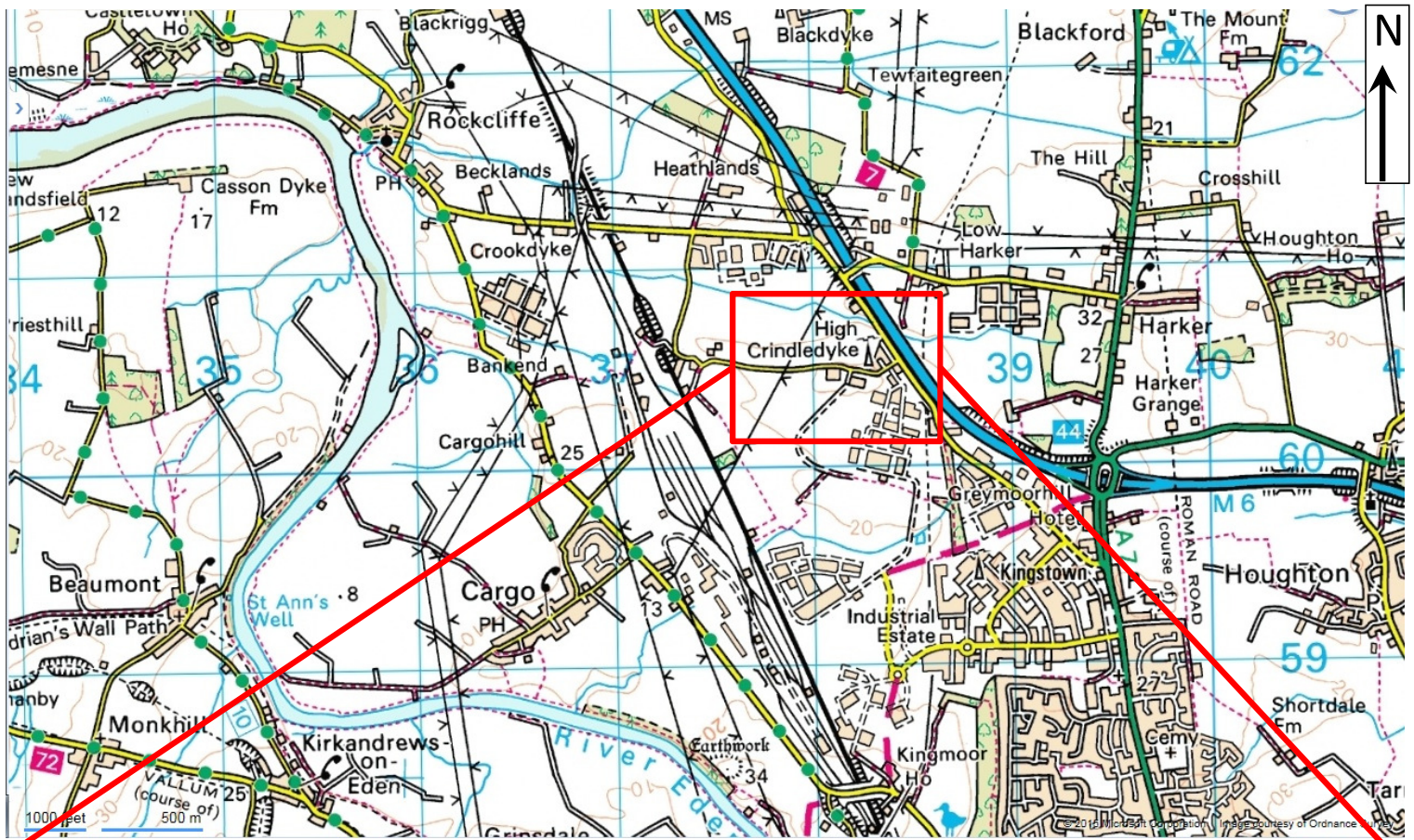
Dr Nick Bunn

Director

For and on behalf of WYG

Enc Figure 1 to 3 and Drawing A094060/C001

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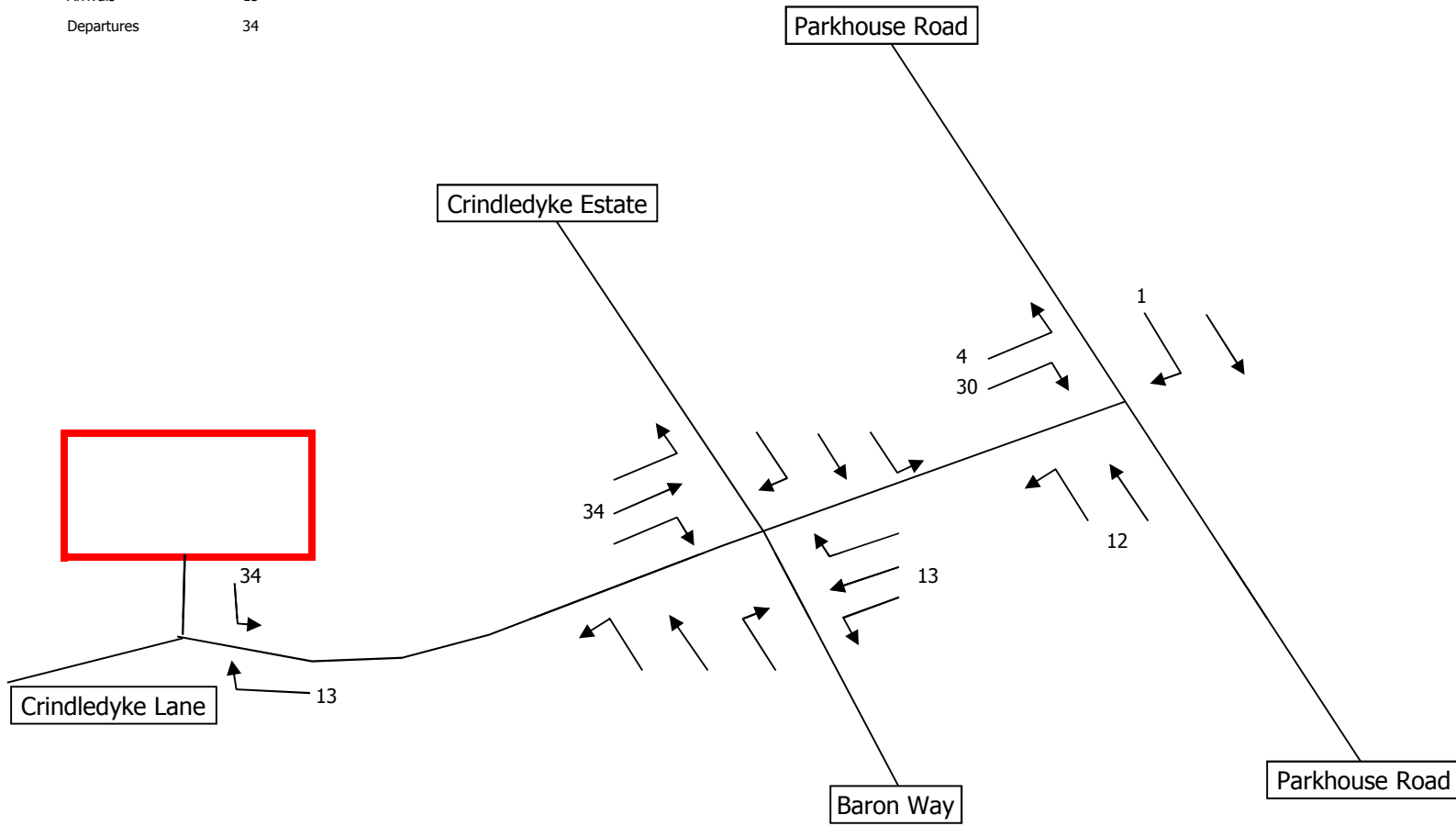
Land North of Crindledyke Lane, Carlisle, Cumbria

Site Location Plan

Figure 1



Arrivals 13
Departures 34



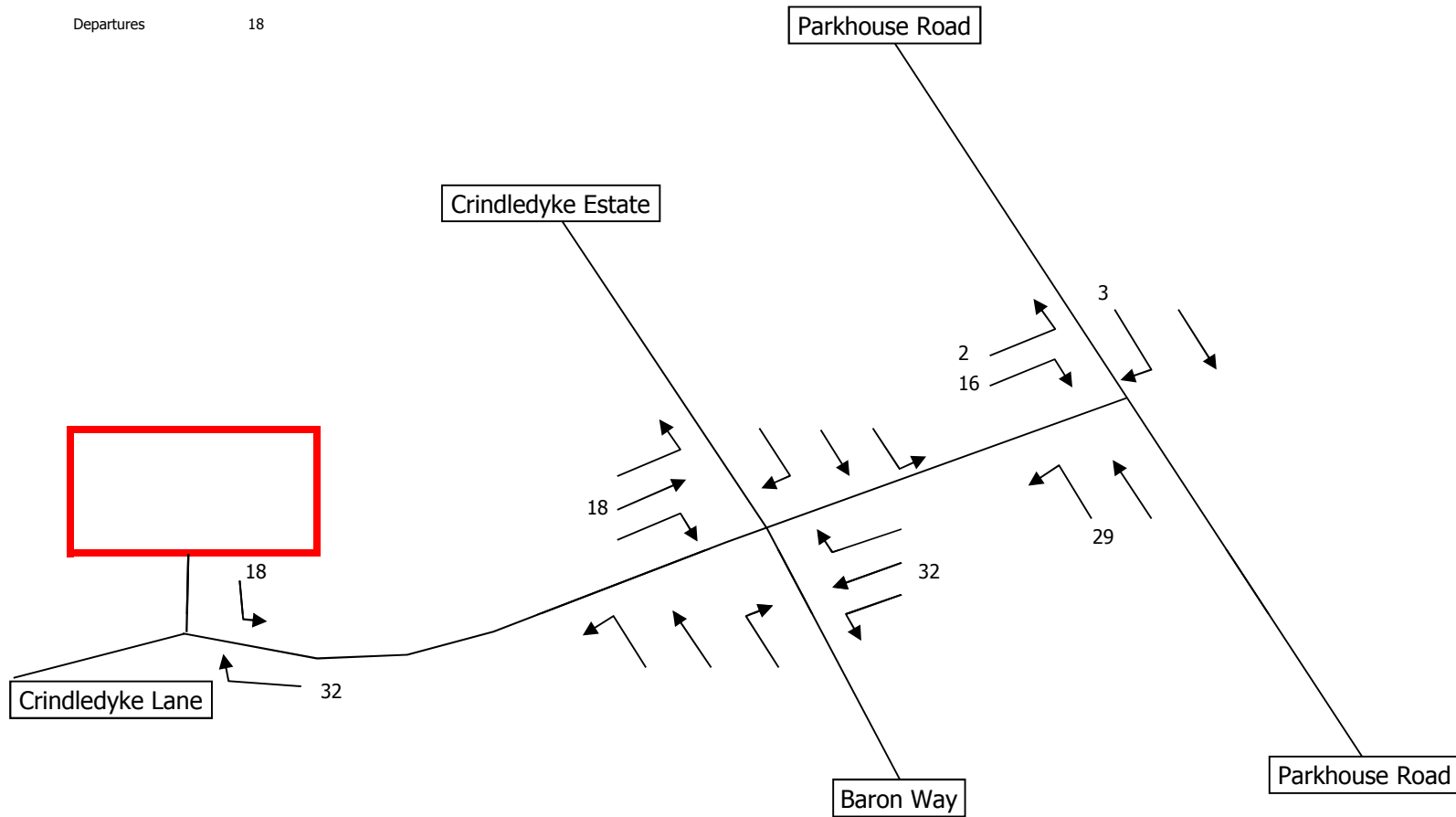
Land North of Crindledyke Lane, Carlisle

AM Peak Hour Development Generated Traffic Flows

Figure 2



Arrivals 32
Departures 18

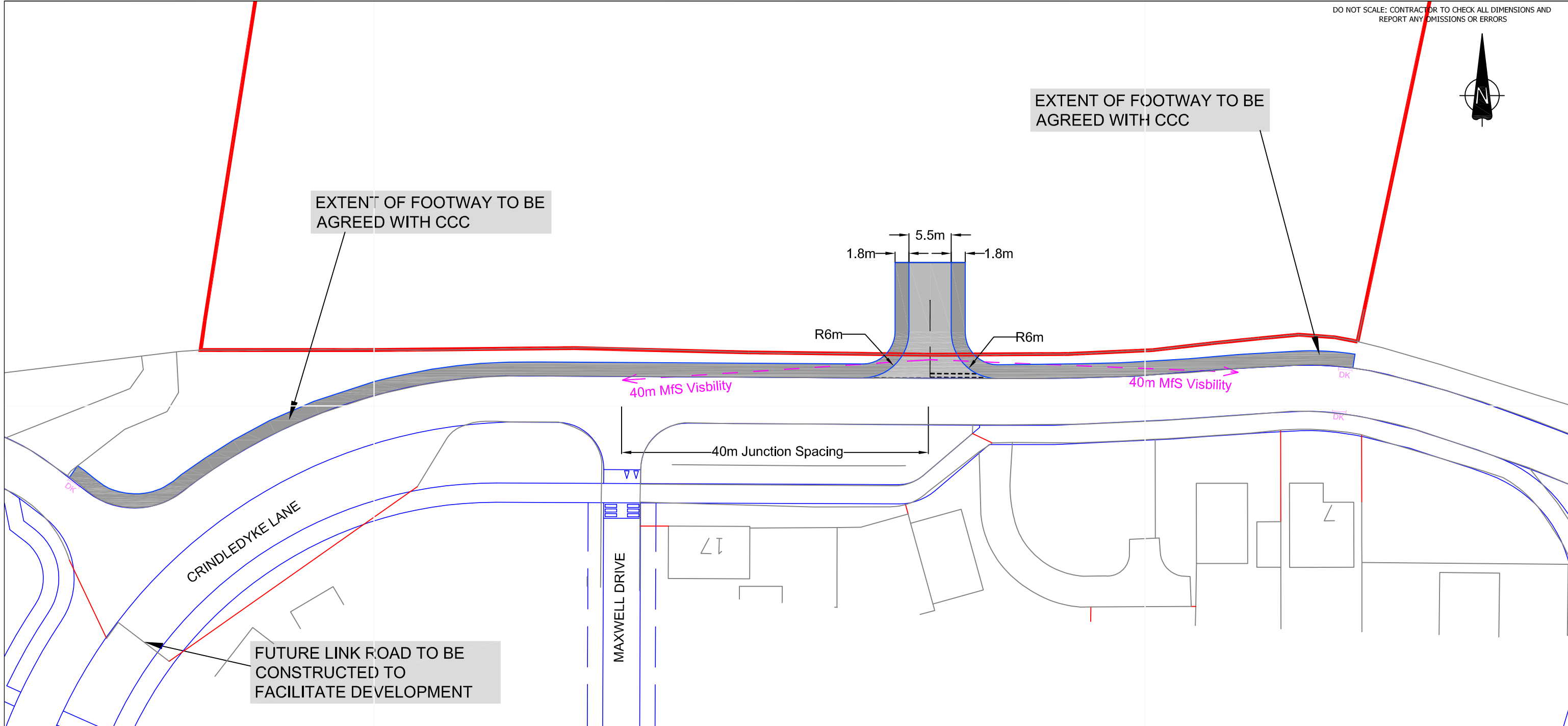


Land North of Crindledyke Lane, Carlisle

PM Peak Hour Development Generated Traffic Flows

Figure 3





| REV | DESCRIPTION | BY | CHK | APP | DATE |
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Project: LAND NORTH OF CRINDLEDYKE LANE

Drawing Title: POTENTIAL SITE ACCESS ARRANGEMENT

| Scale @ | A3 | Drawn | Date | Checked | Date | Approved | Date |
|-------------|--------|-------|-------------|----------|----------|----------|----------|
| 1:500 | | IW | 20.08.15 | GW | 20.08.15 | NB | 24.08.15 |
| Project No. | Office | Type | Drawing No. | Revision | | | |
| A094060 | 91 | 18 | C001 | | | | |