



# Technical Note

<b>TO</b>	<b>NCC</b>	<b>FROM</b>	<b>WSP</b>
<b>DATE</b>	<b>26 April 2019</b>	<b>CONFIDENTIALITY</b>	<b>Public</b>
<b>SUBJECT</b>	<b>A43 Planning Application: Condition 2 Variation</b>		

## PLANNING STATEMENT

This statement has been prepared by WSP on behalf of Northamptonshire County Council (NCC), for Variation of Condition 2 (Scope of Permission – Schedule of approved Plans/Reports) to amend originally submitted General Arrangement Plans and Typical Cross Sections and related details in respect of Phase 1b of the A43 Moulton Bypass.

The changes consist of:

- Change to the height of noise barriers in the noise mitigation scheme.

The approved design arrangement was formed of a 3 metre high earth bund with a 2 metre high noise fence on top. The proposed change will reduce the height of the noise mitigation to a 3 metre high noise barrier, formed of:

- a 3 metre high acoustic fence to the rear of 2-16 Thorpeville (chainage length 340-540 metres)
- a 3 metre high earth bund to the rear of 16-18a Thorpeville (chainage length 540-680 metres) and
- a 3 metre high acoustic fence to the side of properties Byways and Vardo on Overstone Lane (chainage length 1330-1550 metres)
- Change to the location of the drainage attenuation pond;
- Other minor changes to the scheme, described below and as identified on submitted Drawing 2877512A-HGN-100-005 Revision B
  - Removal of bus gate at Thorpeville / Talavera Way
  - Bus route / diverge linking A43 bypass (northbound) with The Avenue removed.
  - Three new bus stops added
  - Turning head location on The Avenue (east of A43 bypass) moved

- New turning head added on existing A43 Thopeville.
- Vehicle crossover's (for private access) added from A43 (southbound and northbound)
- Change in layout for footway link onto Overstone Lane from A43 bypass

## PROJECT BACKGROUND

---

Having received planning consent in October 2015, the A43 Moulton Bypass project will upgrade the existing A43 to a dual carriageway and will support the delivery of the A43 Kettering to Northampton improvement scheme; it also serves as the main of access for the housing development currently under construction by David Wilson Homes. The Bypass connects Old Spinney Roundabout to the upgraded Overstone Roundabout to the East of the existing properties and adjacent to the new development.

## CHANGE TO THE HEIGHT OF NOISE BARRIERS IN THE NOISE MITIGATION SCHEME

---

The original scheme included the provision of large noise bunds and fencing however due to land constraints and concerns over maintaining existing wildlife corridors, the proposed noise mitigation was amended to provide a more sustainable, safer, less visually intrusive and more cost effective solution from the original design. It was originally proposed that the bund and fence would be replaced by a 5m vertical noise barrier however this was considered to be more visually intrusive and reduction to a 3m high fence provided a better balance between visual and noise impacts, which is supported by the reports submitted. The proposed design amendment for the noise mitigation therefore is to reduce the height of the mitigation to 3m along the chainage lengths of 340m – 540m, 540m – 680m and 1330m – 1550m. These design changes, and the respective pros and cons of each, have been discussed with Northamptonshire County Council Planning Officers and Daventry District Council Environmental Health and Landscape Officers.

### Noise Assessment

A noise and vibration chapter was prepared in 2015 to inform the Environmental Statement (ES) supporting the original application. Noise mitigation measures in the form of a 5 metre barrier (consisting of a 3 metre high earth bund with a 2 metre acoustic fence on top) were presented in the ES. The latest noise assessment study (included with this submission) compares the results presented in the ES with those obtained with the revised mitigation scheme, a 3 metre noise barrier.

The Noise Assessment results show that in the long term, 3 properties; 4,6 and 8 Thorpeville would be subject to a noise impact classified as 'moderate adverse' (between 5.0 and 9.9 dB increase). The increase in noise level for moderate impact is likely to be less than 7dB in the long term.

Garden noise levels have also been assessed and the results in Table 1 show that the noise levels increase between the ES and the revised mitigation scheme would range between 0 to 3dB impacting on 15 receptors. The Noise Assessment shows in Table 4 and 9 the addresses for the receptors. At 5 receptors the revised scheme will perform better. It should be noted that the noise model does not consider the acoustic screening effect provided by the new properties at the adjacent development.

Garden Noise Impact	
Noise Level Increase	No. of Receptors
0 dB	2
1 dB	8
2 dB	4
3 dB	1

Table 1: Garden Noise Impact Results

All receptors studied are predicted to experience noise levels below 68dB LA10,18h which is the threshold for qualification for compensation under the Noise Insulation Regulations 1975, and also considered the threshold for the Significant Observed Adverse Effect Level in the Noise Policy Statement for England.

The Noise Assessment found that there are no significant differences between the conclusions obtained with 5m noise mitigation feature presented in the ES and the revised barrier mitigation design.

## Landscape and Visual Statement (LVIA)

The Addendum to the LVIA considered that a 3m high noise barrier would be less visually intrusive than a 2m high fence on top of a 3m high earth bund. On the western side of the highway it is anticipated that the 3m high noise barrier will be less visible from the residential properties and their gardens than the ES design option. The 3m high noise barrier allows a greater number of existing vegetation/trees to be retained than the earth bund and fence option, helping to screen the fence during construction and at road opening. A 3m high noise barrier also allows a slightly greater area for planting, and compared to the ES design (of a 5m high noise mitigation option) will provide screening of the 3m high fence more quickly, by year 5 to 10 of road opening. It is noted, however, that whilst a 3m high barrier is preferable to a 5m high barrier, this would not be sufficient to alter the overall conclusions of the LVIA due to the physical presence of the bypass.

## Sustainability

There are considerable sustainable benefits by installing a 3m high fence in place of a 3m high strengthened earth noise bund with a 2m high noise fence on top as follows;

- A 3m high noise bund will require a 7m to 8m wide footprint, which will result in a greater number of trees and vegetation to be permanently removed which also has a greater impact on wildlife corridors and foraging grounds.
- A 3m high fence will result in retaining a greater number of trees and area of vegetation which will help screen the fence to properties and will also maintain wildlife corridors, which supports Policy N3 of the West Northamptonshire Joint Core Strategy Local Plan. This option also allows a greater area of landscape mitigation by means of new planting and landscaping in place of the bund, providing greater screening to properties on the western side.

## Buildability

A review of the differences between constructing a 3m reinforced bund with a 2m fence on top in comparison to constructing a 3m fence have also been taken into consideration below;

- The construction of a 3m high strengthened noise bund with steep side slopes requires imported fill resulting in a high number of lorry movements impacting on the carbon footprint and the local highway network. This can also increase risk of conflict between construction traffic and other road users and pedestrians.
- Installation of a 3m high strengthened noise bund has a greater impact on the programme due to the duration required to construct the bund. The construction process is labour intensive due to importing fill and compacting at specific layers. Scaffolding would also be required to provide a safe working platform for the installation of the 2m high fence on top of the 3m high bund. In comparison, the 3m fence is quicker and easier to install and requires minimal coordination due to knowledge of the ground conditions and known utilities. Excavation works can be managed around other activities with minimal risk of disruption to the programme.
- Due to its location, maintaining the 3m high fence would be relatively easier and provide maintenance works with safer access. Compared with the wide sloped profile of the earth bund, it is easier to maintain a fence as the machinery required for maintenance is able to provide access to the structure from directly beside it. This operation becomes a more challenging task for machinery and maintenance workers when negotiating maintenance on a sloped structure.
- A 3m high fence solution is more cost effective than constructing a 3m high noise bund with a 2m high fence on top.
- The 3m high noise bund was designed with steep side slopes to fit within the boundaries of the site, however due to the steepness of the side slopes they can't be planted with vegetation. Although they were proposed to be grass seeded, they will be difficult to maintain and the likelihood is that the noise bund would be overgrown with weeds.
- The 3m high noise fence is a standard size fence manufactured by certified fencing suppliers. The foundation design would undergo a structural check to ensure the 3m high noise fence is structurally sound.

## Summary

The revised assessments support the design change to a 3m noise barrier. This change in solution also supports NCC Policy S10 in providing a more sustainable solution in the noise barrier and NCC Policy N3 to include and maintain wildlife corridors.



## CHANGE TO THE LOCATION OF THE DRAINAGE ATTENUATION POND

---

The original scheme included the construction of two surface water attenuation ponds on either side of the A43 bypass to accept water at the low point of the scheme. However, due to land constraints there is insufficient area to accommodate the ponds in the original location and an alternative drainage solution has been designed.

The two attenuation ponds are proposed to be changed to one, located on the south side of the A43 bypass, approximately 200 metres east of the original location.

As the attenuation pond is no longer proposed at the low point of the scheme, a pumping station is also included in the new design. This is located on the north side of the A43 bypass.

It is considered that there are no other significant impacts resulting from the relocation of the attenuation ponds. The Construction Environmental Management Plan (CEMP) and the Ecological Mitigation and Management Plan have been submitted for discharge of Conditions 3 and 14 respectively and have been prepared based on the revised layout of the attenuation pond.

## OTHER MINOR CHANGES TO THE SCHEME

---

Other minor changes to the scheme were made as follows:

Item	Reason
Removal of bus gate at Thorpeville / Talavera Way	Changes made a result of consultation with local residents.
Bus route / diverge linking A43 bypass (northbound) with The Avenue removed.	
Three new bus stops added	Changes made as a result of changes to bus route (above).
New turning head added on existing A43 Thopeville.	Change made as a result of closure of Thorpeville due to consultation with local residents..
Turning head location on The Avenue (east of A43 bypass) moved	Change made to accommodate works by developer at adjacent site.

Vehicle crossovers added from A43 (southbound and northbound)	Change made to accommodate pumping station, attenuation pond and private land cut off by A43 bypass
Change in layout for footway link onto Overstone Lane from A43 bypass	Change made to allow for retention of additional trees, as requested by NCC Planning Ecology Officer.



## SUPPORTING DOCUMENTS

---

This planning statement is supported by the submission of:

- Drawing 287512A-HGN-100-005 Rev B GENERAL ARRANGEMENT KEY CHANGES TO PHASE 1B
- Drawing 287512A-HGN-100-001 Rev C GENERAL ARRANGEMENT

For changes to the noise barrier

- Noise Assessment
  - Noise Contour Maps
  - Landscape and Visual Impact Assessment
  - Landscaping drawings and details
  - Fence drawings and details
  - Typical Cross Sections – Drawings 287512A-HGN-100-006 Rev A and 287512A-HGN-100-007 Rev A
-