

Pell Frischmann

Welcome Break

Directional Signing for Motorway Services Proposals

Technical Note – Amendment with Additions Scenario

Requirements for New Roadside Facility at Hinckley

110705-PEF-XX-XX-TRP-H-000003

Project	Proposed Hinckley Services – Signing Assessment
Client	Welcome Break
Document Title or Subject	Directional Signing for Motorway Services Proposals Technical Note – Amendment with Additions Scenario Requirements for New Roadside Facility at Hinckley
Document Reference	110705-PEF-XX-XX-TRP-H-000003
Revision	P01 – Revise Doc 02 and address NH comments
Prepared by	Phill Batty (Pell Frischmann)
Date	13 th January 2026

Introduction

This Technical Note has been prepared by Pell Frischmann (PF) for Welcome Break.

This document will provide an overarching strategy for, and overview of the required changes or additional signage provision for the new Motorway Service Areas (MSA) at Hinckley.

This Technical Note will briefly outline the required works and identify required new assemblies together with those existing sign assemblies which may need to be amended or replaced in order to incorporate appropriate directional information for the new MSA at Hinckley.

This document will aim to fulfil the minimum requirements for roadside facilities as set out in National Highways document “Signing of roadside facilities on the motorway and all-purpose trunk road network 1.0 | 22/10/24”.

Where beneficial this note includes sketches, diagrams to support recommendations, and screen grabs from Google Streetview etc. These will aid to demonstrate required interventions, errors or omissions, pertinent to the signing of the proposed new MSA at Hinckley.

Location Information

Proposed New Services at Hinckley Leicestershire

Welcome Break are proposing to build and operate a new roadside facility (Motorway Service Area - MSA) off-line west of J1 of the M69 at Hinckley, Leicestershire.

Hinckley lies east of Birmingham, approximately halfway between Coventry and Leicester.

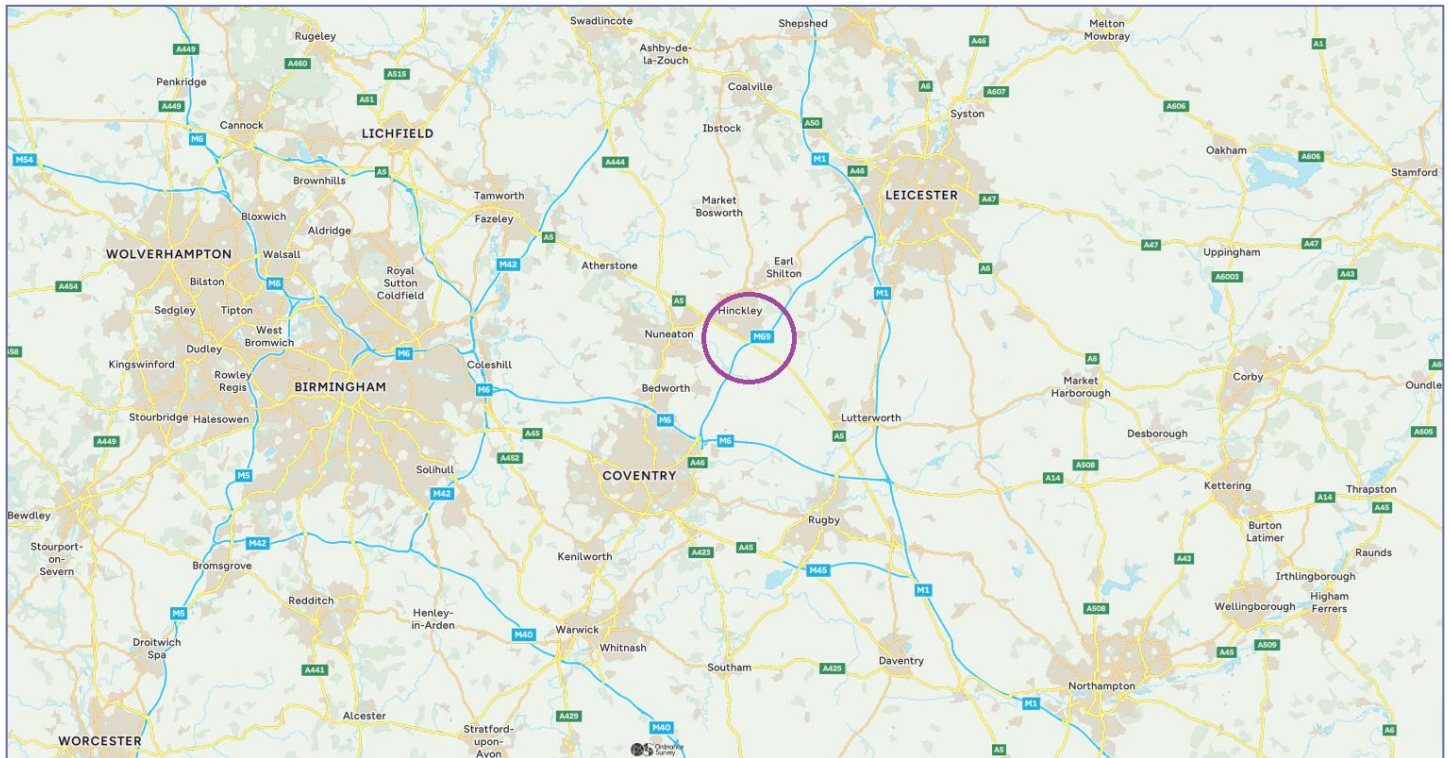


Figure 1 – OS Mapping extract to show Hinckley geographical location

Existing Signing Assessment

Existing signing to change / replace

An appraisal of existing signage both on the National Highways wider motorway and primary route network, and on the local road network around the proposed site has been undertaken to identify the requirements for the install of new and / or amendment of existing signage in order to provide appropriate directional information for the proposed new services at Hinckley.

Refer to documents 110705-PEF-XX-XX-TRP-H-000001 and 110705-PEF-XX-XX-TRP-H-000002. A sign reference identifier in this document will where applicable use the same number as previously given in documents 110705-PEF-XX-XX-TRP-H-000001 and 110705-PEF-XX-XX-TRP-H-000002 for ease of use and aid cross-reference.

Following the previous issue to National Highways of proposals document 110705-PEF-XX-XX-TRP-H-000002 P02, Our client, Welcome Break, have requested that PF undertake further amendments to the proposals to satisfy or address those comments received. This document rennumbers and combines those previous applicable proposals, amendments to applicable proposals, and proposals to satisfy or address comments received from National Highways.

Option F Amendment with Additions Scenario

- F1. Full new assembly PRMS01 M69 southbound approach to j1 - sited at approx. 2 mile (sign to dia. 2917.1)
- F2. Full new assembly PRMS02 M69 southbound approach to j1 - sited at approx. 1½ mile (sign to dia. 2919.3)
- F3. Full new assembly PRMS03 M69 southbound approach to j1 - sited at approx. 600 metres (sign to dia. 2920.1)
- F4. Full new assembly PRMS04 M69 northbound approach to j1 - sited at approx. 2 mile (sign to dia. 2917.1)
- F5. Full new assembly PRMS05 M69 northbound approach to j1 - sited at approx. 1½ mile (sign to dia. 2919.3)
- F6. Full new assembly PRMS06 M69 northbound approach to j1 - sited at approx. 600 metres (sign to dia. 2920.1)
- F7. Full new assembly PRMS07 M69 southbound to replace Confirmatory direction sign (EXMS17) slip nose
- F8. Full new assembly PRMS08 M69 northbound to replace Confirmatory direction sign (EXMS23) slip nose
- F9. Full new assembly PRMS09 M69 downstream of its junction with the M6 / A46 to replace EXMS18
- F10. Full new assembly PRMS10 M6 southbound upstream of its junction with the M6 / A46 to replace EXMS17
- F11. Full new assembly PRMS11 M1 southbound upstream of Leicester Forest East Services to replace EXMS1
- F12. Full new assembly PRMS12 M6 southbound upstream of Corley Services to replace EXMS14
- F13. Full new assembly PRMS13 M69 southbound 200 metres upstream of route confirmatory sign
- F14. Full new assembly PRLS01 A5 eastbound to replace EXLS15 ADS
- F15. Full new assembly PRLS02 A5 westbound to replace EXLS4 ADS
- F16. Erect new sign plate PRLS03 M69 northbound slip to replace EXLS1 ADS
- F17. Erect new sign plate PRLS04 M69 northbound slip to replace EXLS2 Appropriate Lanes
- F18. Erect new sign plate PRLS06 M69 southbound slip to replace EXLS11 ADS
- F19. Erect new sign plate PRLS07 M69 southbound slip to replace EXLS12 Appropriate Lanes
- F20. Erect new sign plate PRLS08 A5 westbound slip to replace EXLS5 Appropriate Lanes
- F21. Erect new sign plate PRLS09 A5 Western arm Directional sign at roundabout exit nose
- F22. Full new assembly PRSS01 A5 eastbound "Services 1m"
- F23. Full new assembly PRSS02 A5 westbound "Services 1/2m"
- F24. Lay 12no. road marking text "SERV" at Stretton Baskerville Roundabout

Intervention F1, Intervention F2, and Intervention F3

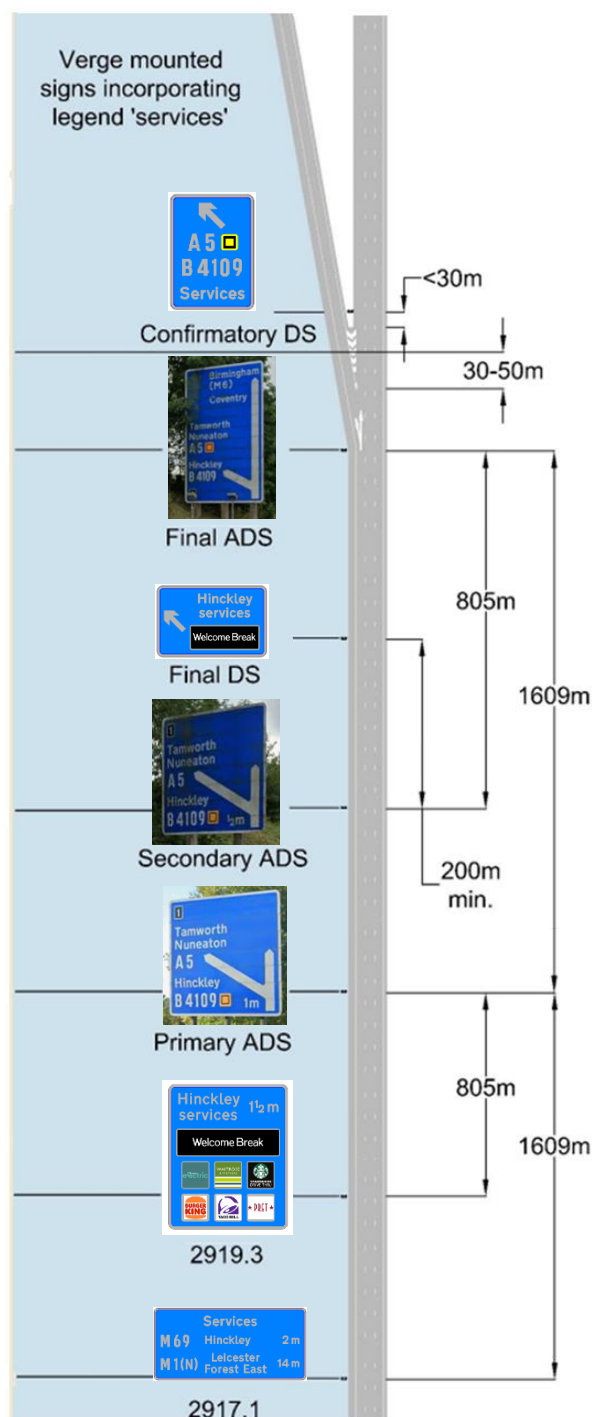
Install new assemblies on southbound approach to the junction 1 – upstream of the exit datum at:

PRMS01 sited at approx. 2m (sign to dia. 2917.1)

PRMS02 sited at approx. 1½m (sign to dia. 2919.3)

PRMS03 sited at approx. 600 metres (sign to dia. 2920.1)

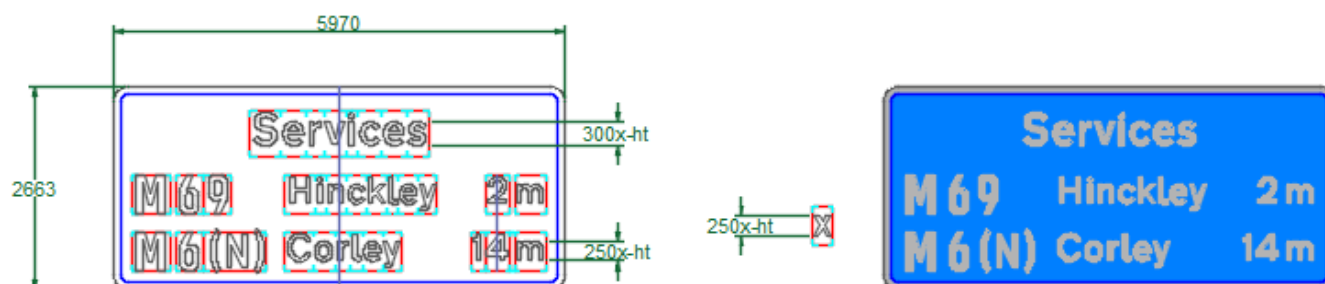
New signing is required on the southbound approach to M69 J1 in line with Figure 4.18 as set out in National Highways document “Signing of roadside facilities on the motorway and all-purpose trunk road network 1.0 | 22/10/24”.



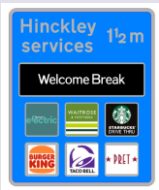
It is proposed that the existing Primary (1m), Secondary (1/2m), and Final ADS remain as is and unaltered.

Ref	Approx Sign Location	New sign face	Intervention detail
PRMS01	M69 southbound 2 mile 2917.1		New sign assembly. New sign face and new post and foundation PRMS01.

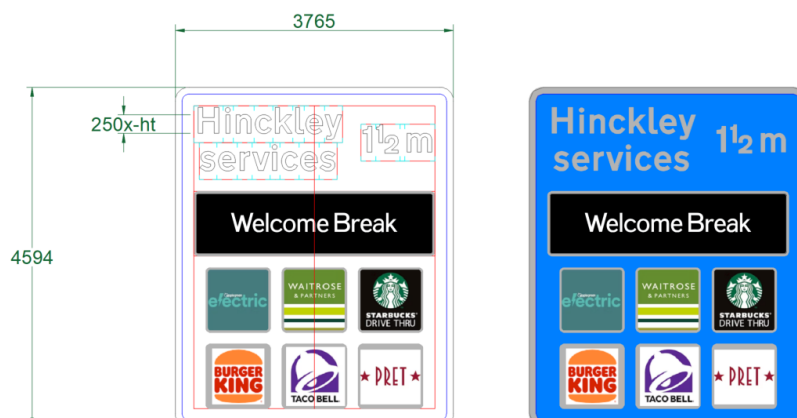
A new sign to dia. 2917.1 is required at approximately 2 miles from the exit datum.



The sign has been designed as per working drawing NP2917.1 to include the services geographical names and following all of the set-out rules from Ch7 with a main x-height of 250mm.

Ref	Approx Sign Location	New sign face	Intervention detail
PRMS02	M69 southbound 1 1/2 mile 2919.3		New sign assembly. New sign face and new posts and foundations PRMS02.

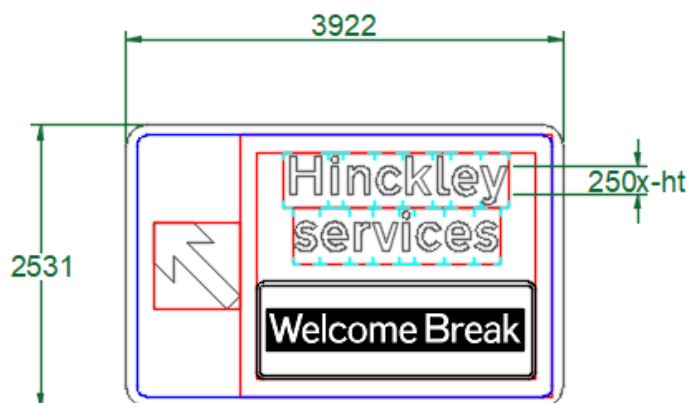
A new sign to dia. 2917.1 is required at approximately one and a half miles from the exit datum. The sign has been designed with a main x-height of 250mm.



Corporate identifiers of operators at the site to be confirmed. Where a specific fuel provider cannot be identified, the first corporate identifier should be substituted with the “Fuel” pump symbol from TSRGD S12-24-8.

Ref	Approx Sign Location	New sign face	Intervention detail
PRMS03	M69 southbound Located 200m downstream of existing 1/2 mile Secondary ADS		New sign assembly. New sign face and new posts and foundations PRMS03.

A new final direction sign is required at approximately 600m from the exit datum. The sign has been designed with a main x-height of 250mm.



Intervention F4, Intervention F5, and Intervention F6

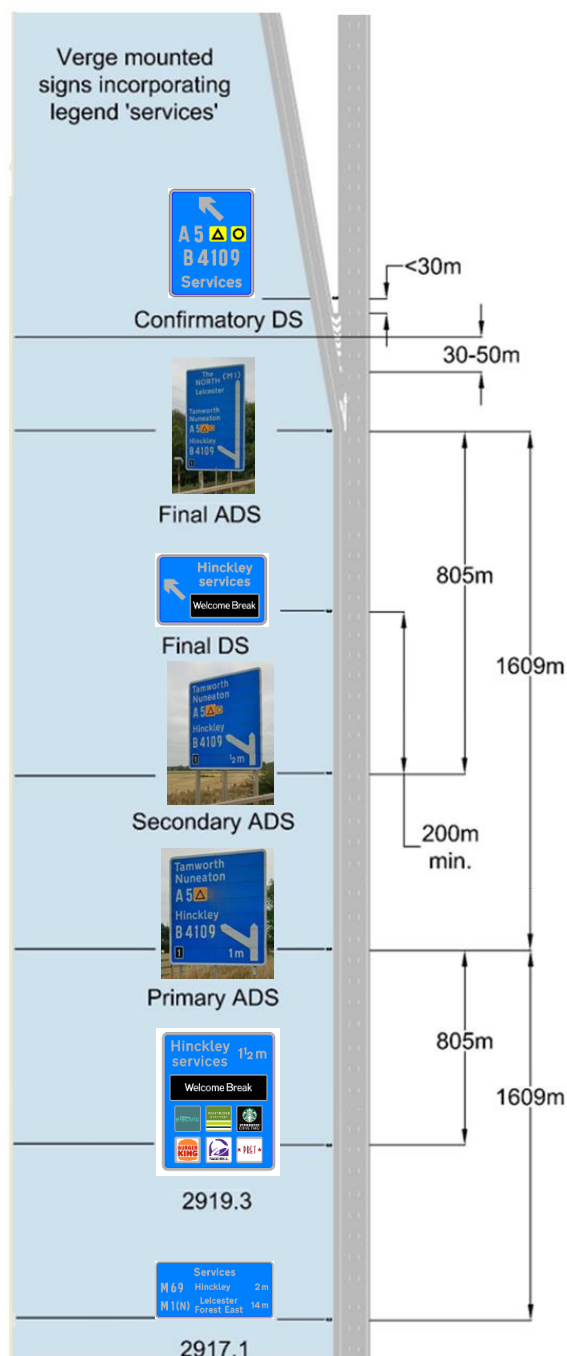
Install new assemblies on northbound approach to the junction 1 – upstream of the exit datum at:

PRMS04 sited at approx. 2m (sign to dia. 2917.1)

PRMS05 sited at approx. 1½m (sign to dia. 2919.3)

PRMS06 sited at approx. 600 metres (sign to dia. 2920.1)

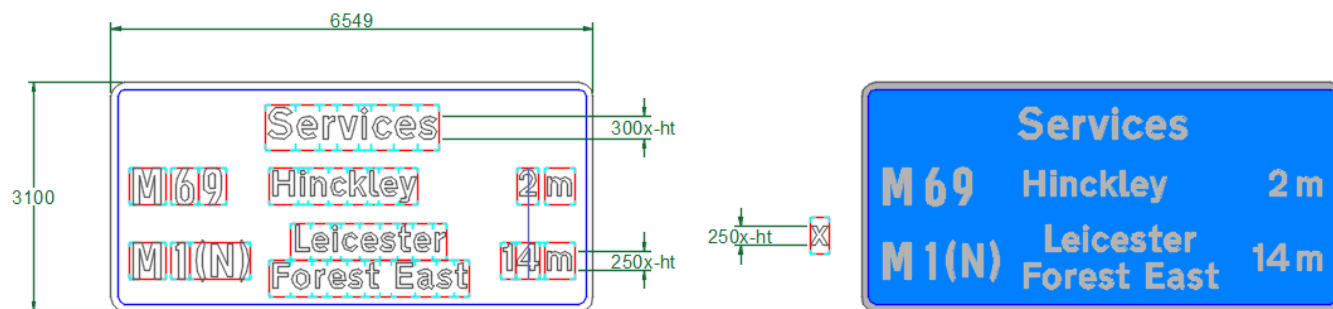
New signing is required on the northbound approach to M69 J1 in line with Figure 4.18 as set out in National Highways document “Signing of roadside facilities on the motorway and all-purpose trunk road network 1.0 | 22/10/24”.



It is proposed that the existing Primary (1m), Secondary (1/2m), and Final ADS remain as is and unaltered.

Ref	Approx Sign Location	New sign face	Intervention detail
PRMS04	M69 northbound 2 mile 2917.1		New sign assembly. New sign face and new post and foundation PRMS04.

A new sign to dia. 2917.1 is required at approximately 2 miles from the exit datum.

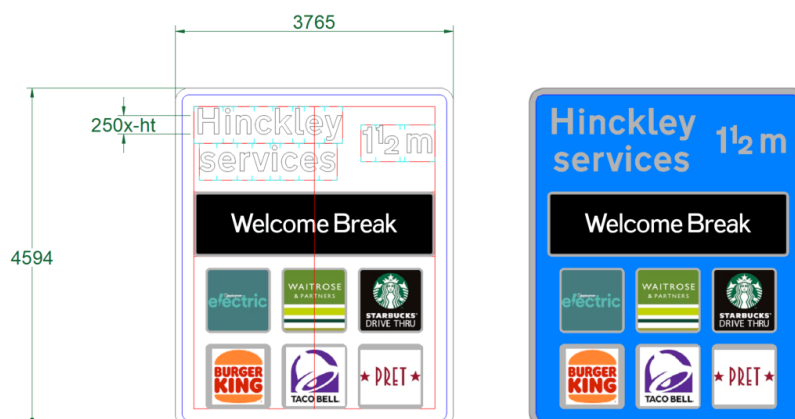


The sign has been designed as per working drawing NP2917.1 to include the services geographical names and following all of the set-out rules from Ch7 with a main x-height of 250mm.

Ref	Approx Sign Location	New sign face	Intervention detail
PRMS05	M69 northbound 1 1/2 mile 2919.3		New sign assembly. New sign face and new posts and foundations PRMS05.

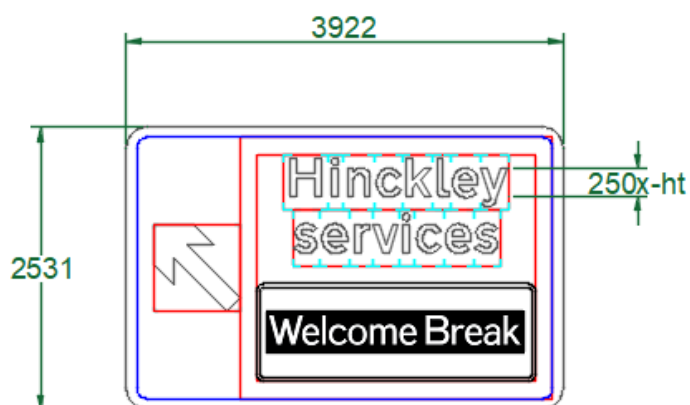
A new sign to dia. 2917.1 is required at approximately one and a half miles from the exit datum. The sign has been designed with a main x-height of 250mm.

Corporate identifiers of operators at the site to be confirmed. Where a specific fuel provider cannot be identified, the first corporate identifier should be substituted with the “Fuel” pump symbol from TSRGD S12-24-8.



Ref	Approx Sign Location	New sign face	Intervention detail
PRMS06	M69 northbound Located 200m downstream of existing 1/2 mile Secondary ADS		New sign assembly. New sign face and new posts and foundations PRMS06.

A new final direction sign is required at approximately 600m from the exit datum. The sign has been designed with a main x-height of 250mm.



Intervention F7

Full new assembly PRMS07 to replace EXMS17;

The existing sign assembly located on the nose of the junction exit shows only the A5 route number.

The proposed new sign will need to incorporate the legend “Services” as well as the currently shown “A5”.

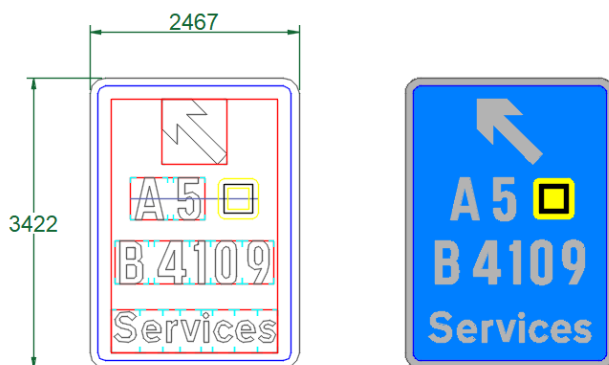
Full new assembly PRMS07 to replace Confirmatory direction sign (EXMS17) southbound M69 slip nose;

Ref	Approx Sign Location	Google Streetview Capture	Intervention detail
EXMS 17	M69 southbound Confirmatory DS		Replace full sign assembly. New sign face and new post and foundation PRMS07.

The upstream ADS signage also indicates route “B4109” together with a tactical diversion symbol [open square].

The proposed new sign PRMS07 has therefore been designed following all of the set-out rules from Ch7 with an x-height of 250mm (refer to TSM Ch7 Appendix E - row 7, column 7, lower value).

For fullness and route continuity the proposals correct the current omissions and errors however this results in the sign overall dimensions significantly increasing over the existing sign which this would replace.



The proposed sign dimensions should be such that it can be satisfactorily mounted on a single signpost. There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

A replacement post will very likely be installed outside of the VRS working width as is the case with the existing assembly. There is however a likelihood that the replacement sign face (being substantially larger than the sign it is to replace) may encroach into the VRS working width. There may be potential for a large vehicle (such as HGV or bus) to strike the sign face as the VRS yields if involved in a collision with the VRS. This may be mitigated through the use of a GRP sign substrate in this location.

Intervention F8

Full new assembly PRMS08 to replace EXMS23;

The existing sign assembly located on the nose of the junction exit shows only the A5 route number.

The proposed sign will need to incorporate the legend “Services” as well as the currently shown “A5”.

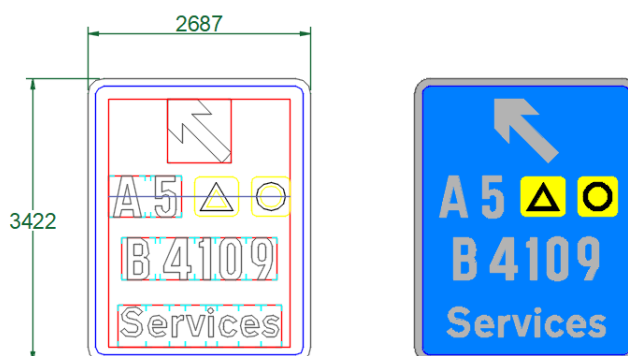
Full new assembly PRMS08 to replace Confirmatory direction sign (EXMS23) northbound M69 slip nose;

Ref	Approx Sign Location	Google Streetview Capture	Intervention detail
EXMS23	M69 northbound Confirmatory DS		Replace sign assembly. New sign face and new post and foundation PRMS08.

The upstream ADS signage also indicates route “B4109” together with two tactical diversion symbols [open triangle] [open circle].

The proposed new sign PRMS08 has therefore been designed following all of the set-out rules from Ch7 with an x-height of 250mm (refer to TSM Ch7 Appendix E - row 7, column 7, lower value).

For fullness and route continuity the proposals correct the current omissions and errors however this results in the sign overall dimensions significantly increasing over the existing sign which this would replace.



The proposed sign dimensions should be such that it can be satisfactorily mounted on a single signpost. There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

A replacement post will very likely be installed outside of the VRS working width as is the case with the existing assembly. There is however a likelihood that the replacement sign face (being substantially larger than the sign it is to replace) may encroach into the VRS working width. There may be potential for a large vehicle (such as HGV or bus) to strike the sign face as the VRS yields if involved in a collision with the VRS. This may be mitigated through the use of a GRP sign substrate in this location.

It is noted that the existing roundabout ADS sign (EXLS9 to be replaced by PRLS06) on this approach displays 3 tactical diversion symbols ('filled circle', 'open square', and 'open triangle'). This is not consistent with the upstream mainline ADSs however (which indicate only 'open square'). There is however a “secret sign” located approximately 50m upstream

of the '100 yards' countdown marker and this may display other tactical diversion information including 'filled circle', and 'open triangle' routes to be followed.

NH should confirm the current tactical diversion routes signed on approach to this diverge and confirm what symbols are to be included on the proposed replacement sign.

Intervention F9

Replace EXMS18 Full new assembly PRMS09;

There is an existing sign facing northbound traffic on the M69 just downstream of its junction with the M6 / A46.

The sign does not conform to TSRGD and the displayed reference to services on the “M1(Northbound) 17m” would no longer be relevant as the new MSA at Hinckley could be reached and accessed prior to those signed services [Leicester Forest East].

Full new assembly PRMS09 to replace Confirmatory direction sign (EXMS18) northbound M69 downstream of its junction with the M6 / A46;

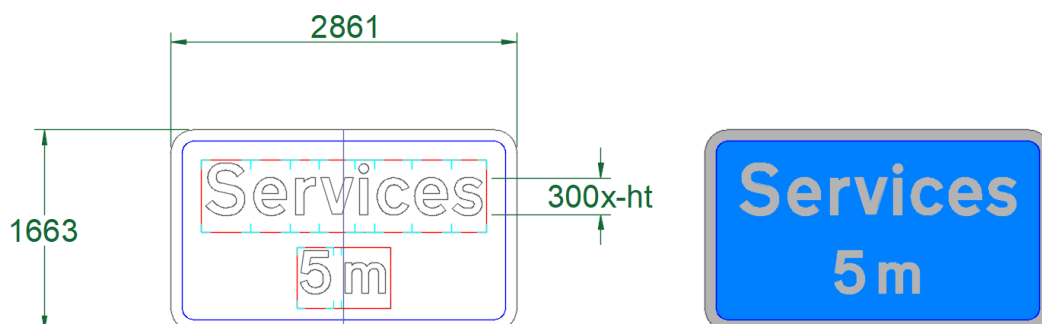
Ref	Approx Sign Location	Google Streetview Capture	Intervention detail
EXMS18	M69 northbound Services DS		Replace sign assembly. New sign face and new post and foundation PRMS09.

At each point of entry to the motorway network, where space permits, a sign to diagram 2918 should be provided, indicating the distance to the next MSA along that motorway.

This type of sign is normally located 200m downstream of the Route Confirmatory sign.

The sign should display the distance to the next services which would be Hinckley at a distance of 5 miles (actual 5.3 miles rounded down to nearest).

The sign should therefore be replaced with a new assembly sign to dia. 2918.



There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Intervention F10

Replace EXMS17 Full new assembly PRMS10;

There is an existing sign facing southeast bound traffic on the M6, upstream of its junction with the M69 / A46.

The sign does not conform to TSRGD and the displayed reference to the services on the “M1(N) 18m” and “M1(S) 20” would no longer be relevant as both the new MSA at Hinckley (to be located off M69 J1) and the recently constructed existing services at Rugby (M6 J1) are reached and accessed prior to those currently signed services [Leicester Forest East and Watford Gap].

Full new assembly PRMS10 to replace sign (EXMS17) southeast bound M6 upstream of its junction with the M69 / A46;

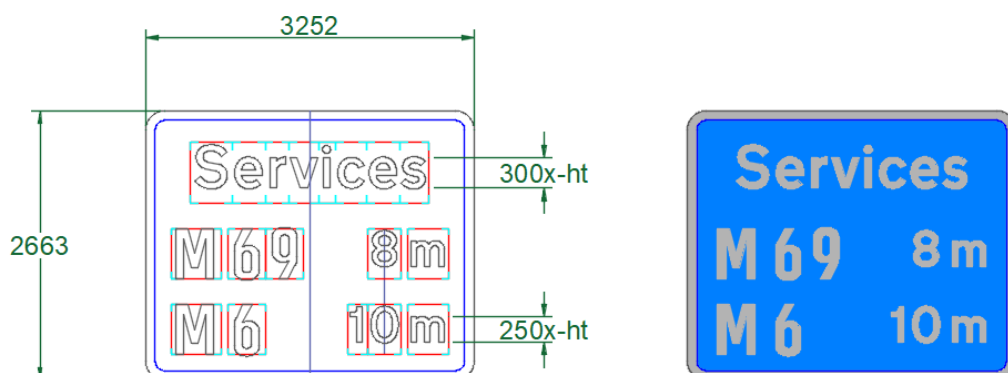
Ref	Approx Sign Location	Google Streetview Capture	Intervention detail
EXMS17	M6 southeast bound Located between J3 and J2.		Replace sign assembly. New sign face and new post and foundation PRMS10.

The reference to services on M1(N) would no longer be relevant on a sign in this location as the new services at Hinckley would be reached prior reaching the displayed services “M1(N)” [Leicester Forest East].

Similarly, the reference to services on M1(S) would no longer be relevant on a sign in this location as the new services at Rugby would be reached prior reaching the displayed services “M1(S)” [Watford Gap].

The existing sign does not conform to TSRGD as the distances do not have the “m” suffix. Unlike route confirmatory signs which do not have the “m” suffix, signs to dia. 2917.1 should have this.

The sign should have been amended upon the opening of the MSA at Rugby. It may be prudent therefore to reach an agreement with National Highways for the full replacement of this assembly at shared cost.



There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Intervention F11

Replace EXMS1 Full new assembly PRMS11;

There is an existing sign facing south bound traffic on the M1 upstream of its junction with the M1 / A46 located approximately 2 miles in advance on approach to Leicester Forest East MSA.

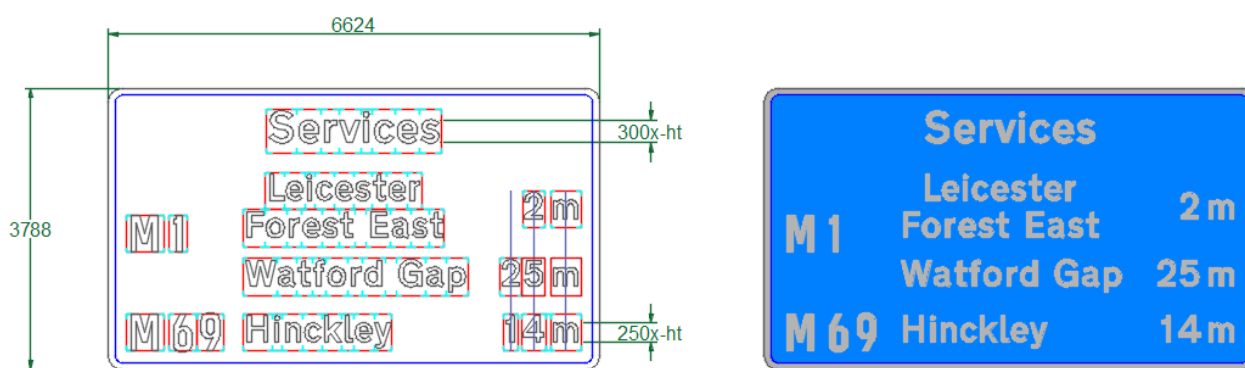
The sign is the older variant (dia. 2917) with owner operator details shown on the face. The existing displayed reference to next services on M6(N) would no longer be relevant on a sign in this location as the new services at Hinckley would be reached prior reaching the displayed services “M6(N) Welcome Break” [Corley].

National Highways have expressed concern over the sign being currently mounted at a height lower than would be expected.

Full new assembly PRMS11 to replace sign (EXMS1) south bound M1 upstream of its junction with the M1 / A46 and on approach to Leicester Forest East MSA;

Ref	Approx Sign Location	Google Streetview Capture	Intervention detail
EXMS1	M1 south bound Approach to Leicester Forest East MSA at 2 miles.		Replace sign assembly. New sign face and new post and foundation PRMS11.

The sign should therefore be replaced with a new assembly sign to dia. 2917.1.



There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Intervention F12

Replace EXMS14 Full new assembly PRMS12;

There is an existing sign facing southeast bound traffic on the M6 located approximately 1 mile upstream of Corley MSA.

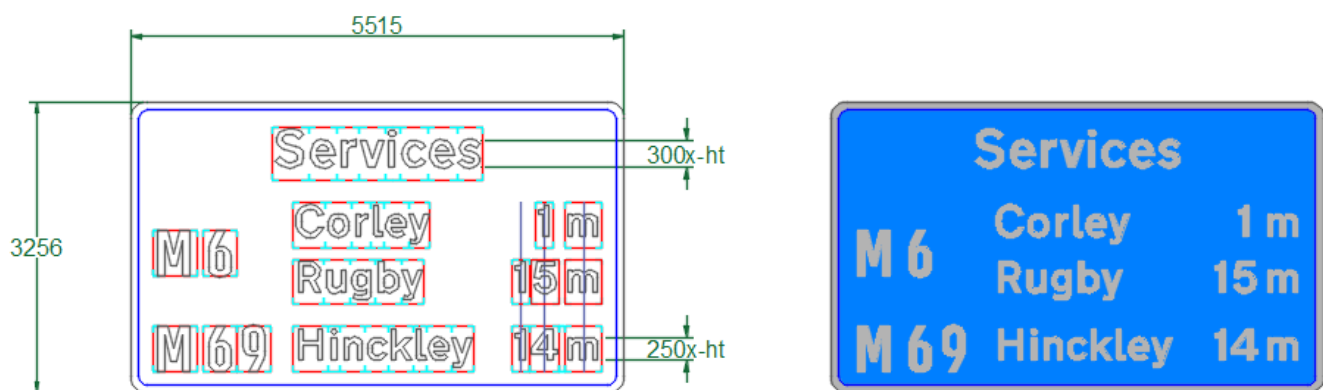
The sign is the older variant (dia. 2917) with owner operator details shown on the face. The existing displayed references to next services on M1(N) and M1(S) would no longer be relevant on a sign in this location.

The proposed new services at Hinckley (off M69 J1) would be reached prior to the displayed services “M1(N) Welcome Break KFC” [Leicester Forest]. Likewise, the services at Rugby (off M6 J1) would be reached prior to the displayed services “M1(S) McDonalds Costa” [Watford Gap].

Full new assembly PRMS12 to replace sign (EXMS14) east bound M6 1 mile upstream of Corley MSA;

Ref	Approx Sign Location	Google Streetview Capture	Intervention detail
EXMS14	M6 east bound Approach to Corley MSA at 1 mile		Replace sign face. New sign face and new post and foundation PRMS12.

The sign should therefore be replaced with a new assembly sign to dia. 2917.1.



There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Subject to the agreement and approval by National Highways it may be possible to provide this replacement sign face and reuse part of the existing post arrangement. Contingent upon confirmation, an assessment of the existing signposts may determine whether a replacement sign face can be accommodated within the capacity of the existing post load. The existing sign is currently mounted on a 5 post assembly.

Intervention F13

Full New assembly PRMS13;

There is no sign currently in place on the M69 just downstream of its junction with the M1 / A5460 to provide drivers with information relating to the distance to next motorway services.

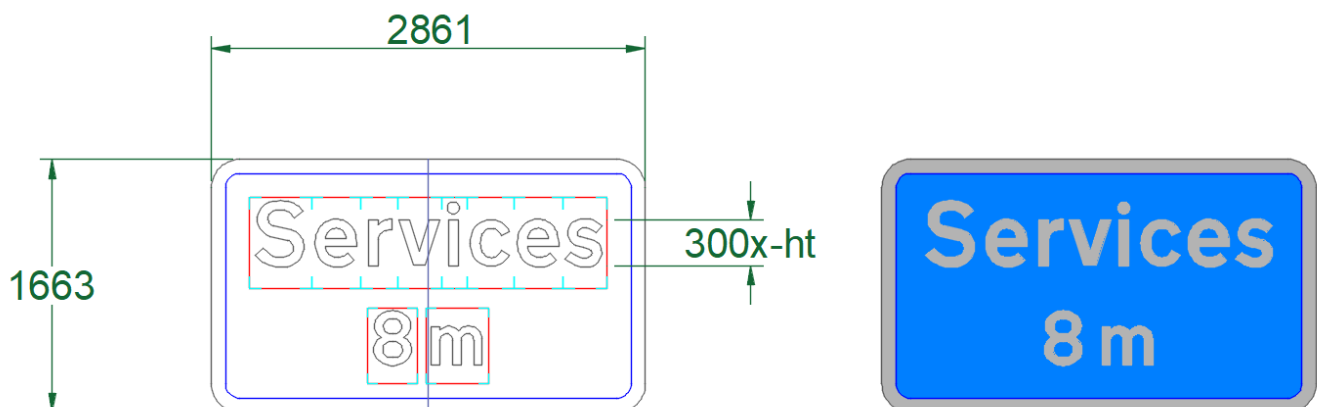
At each point of entry to the motorway network, where space permits, a sign to diagram 2918 should be provided, indicating the distance to the next MSA along that motorway.

This type of sign is normally located 200m downstream of the Route Confirmatory sign (existing sign image grab from Google with point approx. 200m downstream).



A new sign of this type should display the distance to the next services which would be Hinckley, at a distance of 8 miles (actual 8.4 miles rounded down to nearest mile).

A new sign should be installed to dia. 2918.



There is no existing VRS at the point 200m downstream of the existing Route Confirmatory sign. A new assembly would require a passively safe structure.

Intervention F14

Replace EXLS15 Full new assembly PRLS01;

The MSA may be signed in advance on the all-purpose trunk road (APTR) network. A new replacement ADS sign is proposed to incorporate an additional map element to direct drivers to the new service area at Hinckley via the new traffic signal-controlled access junction.

Full new assembly PRLS01 to replace sign (EXLS15) A5 eastbound Miller and Carter Steakhouse

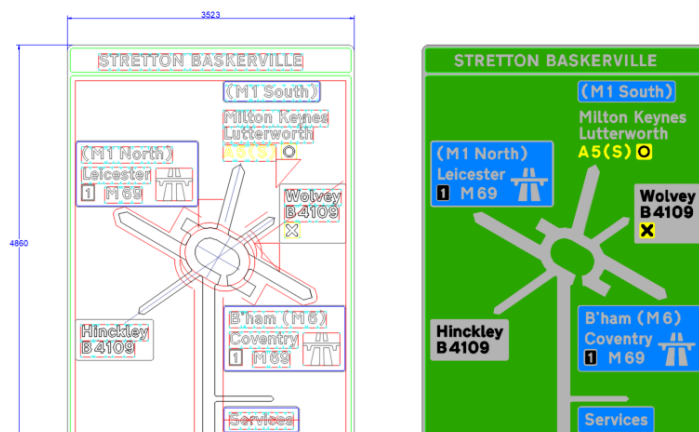
Ref	Approx Sign Location	New sign face	Intervention detail
PRLS01 (EXLS15)	A5 southbound approach to roundabout. To replace the existing sign assembly outside Miller and Carter Steakhouse.		New sign assembly. New sign face and new post/s and foundations PRLS01.

A sign indicating the route to the new MSA should be provided on all-purpose trunk road (APTR) network. Where “Services” or “Geographical name services” is incorporated into a directional sign this should be in a blue panel.

It is proposed to install a full new sign assembly to replace the existing ADS sign assembly located outside the Miller and Carter Steakhouse.



The posted speed limit on A5 Watling Street travelling eastbound (from the roundabout at Logix Park) on approach to the site is 40mph. An x-height of 100mm would therefore be appropriate for this sign. (refer to TSM Ch7 Appendix E – row 3, column 3, lower value). The existing sign face to be replaced has an x-height of 100mm.



A replacement of this sign will also provide opportunity to correct existing errors with regard to the incorporated tactical diversion symbols. The tactical diversion symbols should be associated with the relevant route number to be followed and where applicable contained within the relevant panel.

It would be recommended that the new sign be mounted on a passively safe posts given the likely 85th percentile vehicle speed in both directions at this location being at or around 40mph. There is no existing VRS in this location.

Intervention F15

Replace EXLS4 Full new assembly PRLS02;

The MSA may be signed in advance on the all-purpose trunk road (APTR) roads.

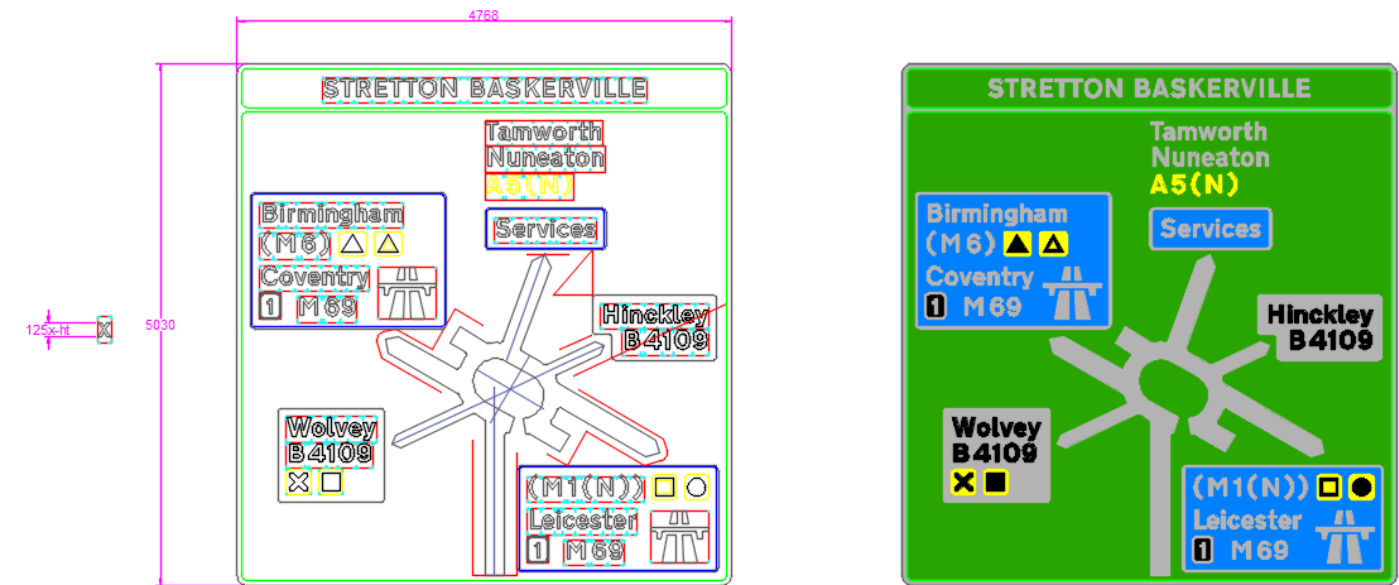
A new replacement ADS sign is proposed to replace EXLS4 to incorporate the legend “Services” on blue panel and to direct drivers to the new service area at Hinckley from the roundabout via the westbound A5 exit from the roundabout.

Full new assembly PRLS02 to replace sign (EXLS4)

Ref	Approx Sign Location	New sign face	Intervention detail
PRLS02 (EXLS4)	A5 westbound approach to roundabout.		New sign assembly. New sign face and new post/s and foundations PRLS02.

It is proposed to install a full new sign assembly to replace the existing ADS sign assembly located opposite Hinkley Island Leonardo Hotel.

An assessment of the existing sign assumes that the sign has been designed following most of the set-out rules from TSM Ch7 with an x-height of 125mm (appropriate lower value for an 85th percentile approach speed between 41 and 50mph).



A replacement of this sign will also provide opportunity to correct existing errors with regard to the incorporated tactical diversion symbols. The tactical diversion symbols should be associated with the relevant route number to be followed and contained within the relevant panel.

The destinations reached via the first downstream exit are not currently included on the sign face. The addition of a suitable route arm and destination block panel will aid approaching drivers in better understanding the road layout ahead and using the roundabout more safely. This will also improve legibility of the tactical diversion symbols associated with this route.

There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Intervention F16

Replace EXLS1 New ADS sign plate PRLS03 M69 northbound slip;

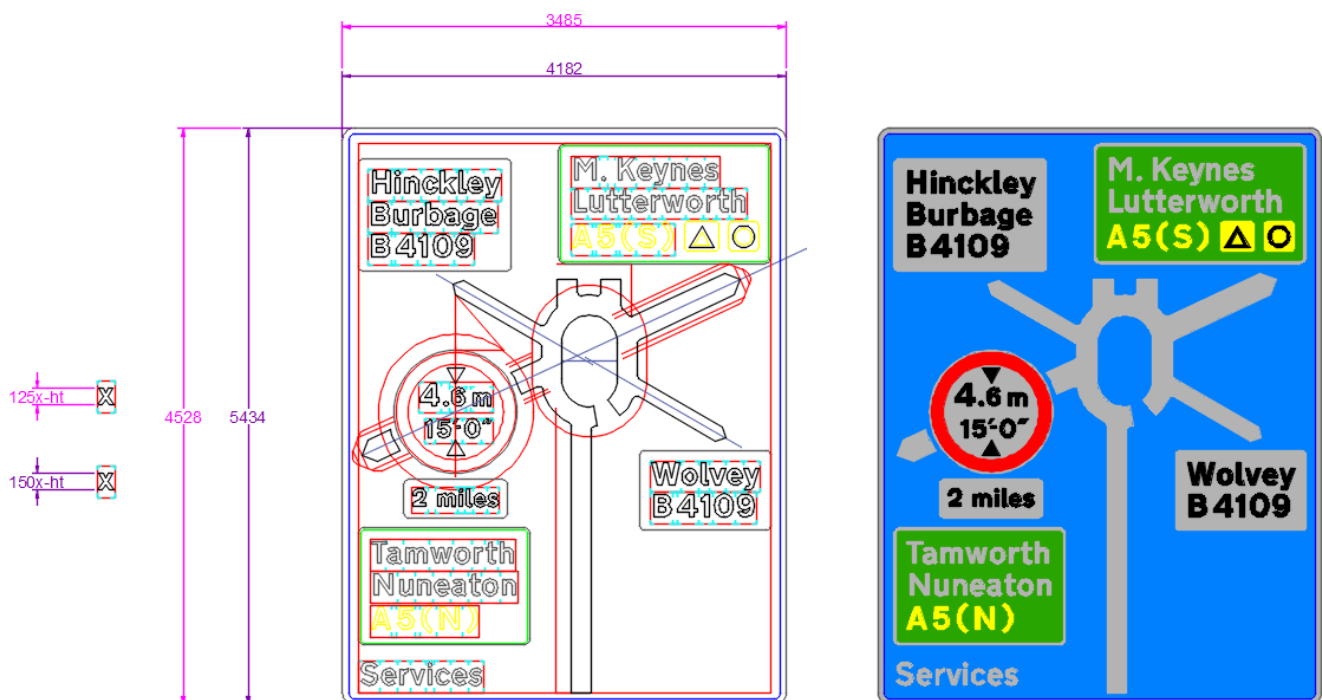
The MSA may be signed in advance on the all-purpose trunk road (APTR) roads.

A new replacement ADS sign face is proposed to replace EXLS1 to incorporate the legend “Services” and to direct drivers to the new service area at Hinckley from the roundabout.

Ref	Approx Sign Location	New sign face	Intervention detail
PRLS03 EXLS1	M69 northbound Exit slip road primary ADS		New sign face mount on existing post/s PRLS03

Where “Services” or “Geographical name services” is incorporated into a motorway slip road advance directional sign this should be in white on the main blue background of the sign.

It is proposed to install a new sign face to replace the existing ADS onto the existing 3no. Lattix posts. The new sign face layout design should be such that the proposed overall area of the sign face does not exceed the existing sign dimensions so that no additional load will be exerted on the post and foundation assembly, thereby negating the need to fully replace.



The slip road is national speed limit on approach to the roundabout. An x-height of 150mm would be more appropriate for this sign on the assumption that the likely 85th percentile vehicle speed on approach to the sign is at or between 51 and 60 mph given road geometry and expectation of drivers slowing having exited the motorway main alignment (refer to TSM Ch7 Appendix E – row 5, column 3, lower value). Contingent upon confirmation, the existing sign proportions suggest an x-ht of 125mm has been used on the existing sign face however.

There is no existing VRS in this location. The existing sign face is mounted on 3no. Lattix posts.

Intervention F17

Patch or Replace EXLS2;

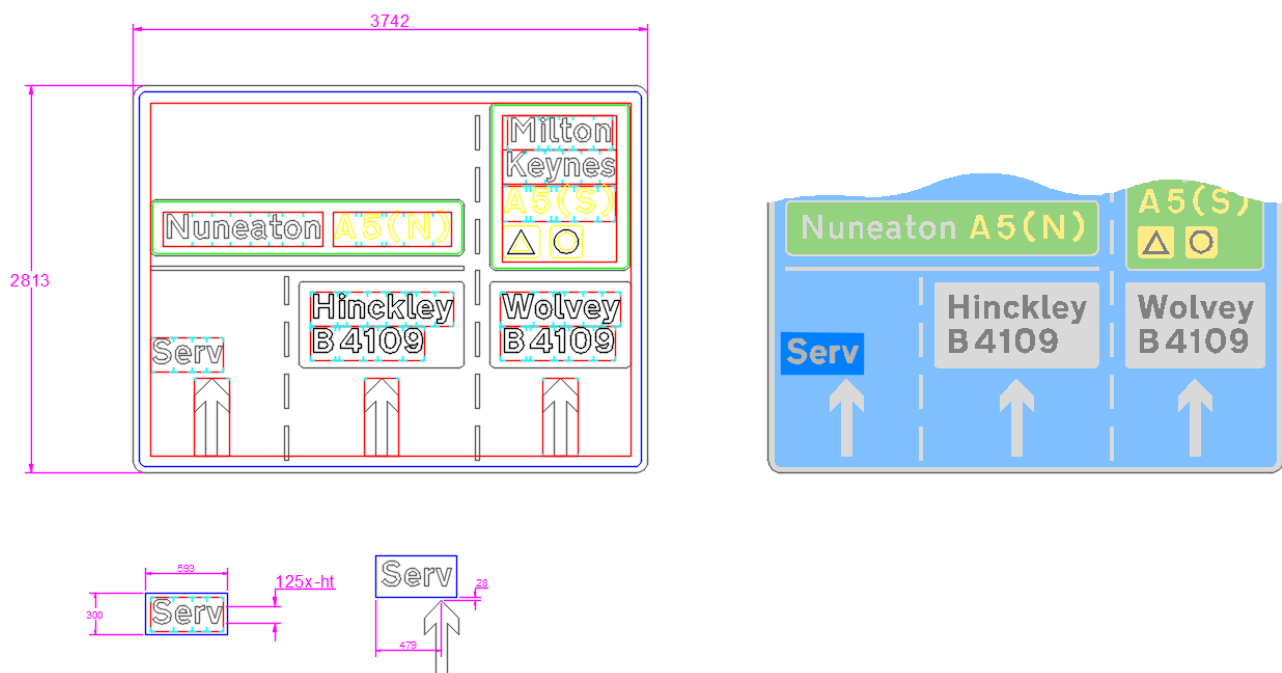
National Highways comments suggest that there may be concerns with regard to the addition of a patch incorporating the legend “Serv” given that there may be differences in the retroreflectivity of newer and older materials contained within the same sign face. The sign face appears to have been replaced previously at some point between Nov 2020 and May 2021 however, and it is therefore assumed that the sign will be in a good condition given its age.

Patch EXLS2 or Replacement new sign face PRLS04 on retained posts

Ref	Approx Sign Location	Existing sign face image	Intervention detail
PRLS04 (EXLS2)	M69 northbound Exit slip road appropriate lane sign		Option 1 Patch with “Serv” legend 125mm x-ht Option 2 New sign face PRLS04 to be mounted on existing posts. Option 2 New full assembly PRLS04 to replace XEXLS2

An assessment of the existing sign face assumes that the sign has been designed following all of the set-out rules from TSM Ch7 with an x-height of 125mm (appropriate lower value for an 85th percentile approach speed between 41 and 50mph).

Subject to the agreement and approval by National Highways it may be possible to therefore overlay a portion of this existing sign with an adhesive patch of the same colour containing the appropriate legend “Serv” rather than necessitating a full sign face replacement.



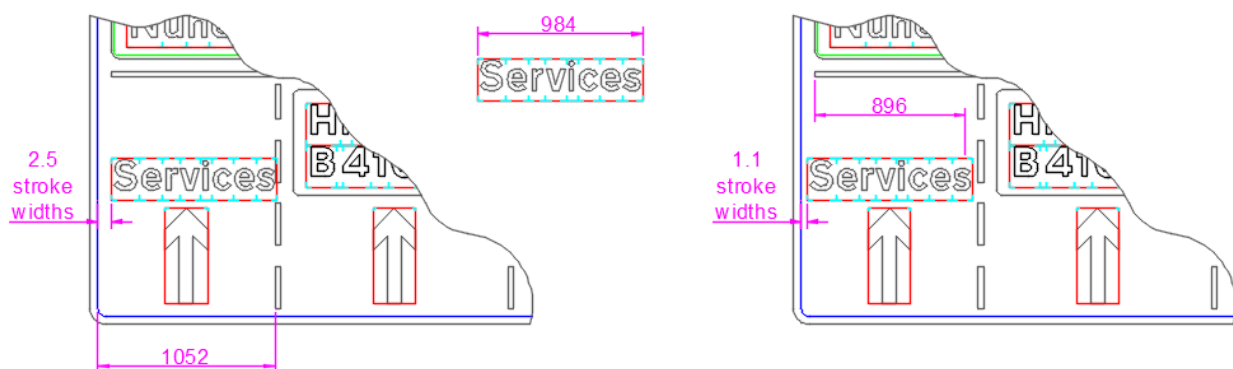
The width of the left-hand lane is calculated proportionately from the other sign elements (at 1052mm inside edge of border to lane marking symbol, 896mm remaining with 2.5sw spacing to other sign elements).

The width of tiled legend “Services” at an x-height of 125mm is 984mm.

Including the full worded legend “Services” would likely be clearer to approaching drivers. However, as calculated the left-hand lane is likely insufficient to enable the full worded legend “Services” to be accommodated within the available width. This would not be possible whilst fully adhering to the regulations.

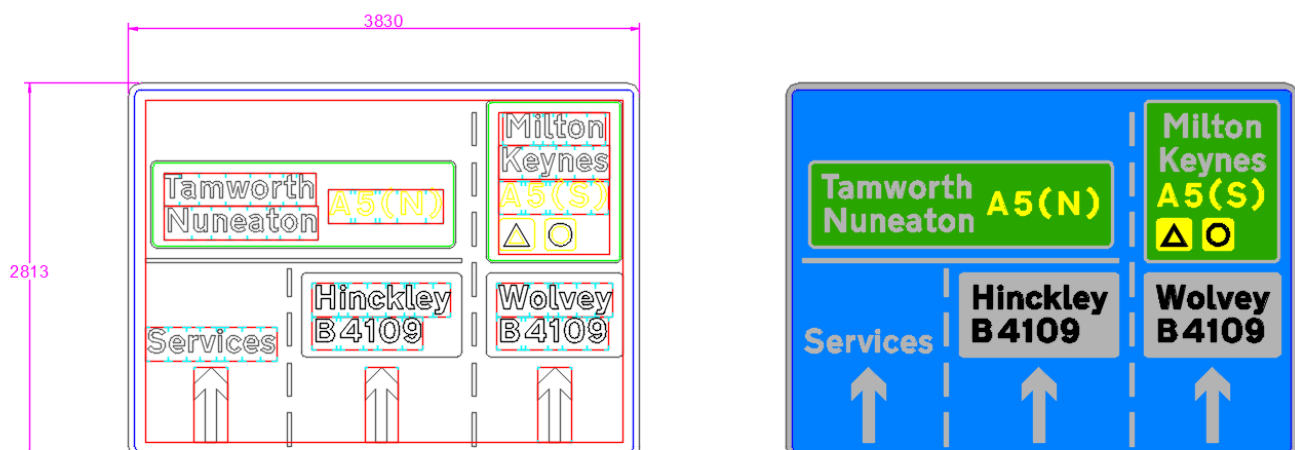
The full worded legend “Services” could never the less be included in a patch, however this would require either:

- The patch being manufactured at an x-height smaller than the main sign x-height (this is not permitted by the regulations however and would need to be agreed by NH), or
- By locating the legend “Services” so that it is centered above the lane arrow. This would however result in the tiled legend being placed at only 1.1 stroke widths from both the inside edge of the sign border and the lane marking symbol, rather than the set 2.5 stroke widths and would also need to be agreed by NH.



It may be preferred to install a full replacement sign face on the retained existing post arrangement. Initial calculations suggest that the existing sign face (at an x-height of 125mm) has overall dimensions at 3742w x 2813h.

A replacement sign face designed following all of the set-out rules from TSM Ch7 also with an x-height of 125mm (appropriate lower value for an 85th percentile approach speed between 41 and 50mph) and incorporating the full worded legend “Services” would produce a sign with overall dimensions 3830w x 2813h.



A sign face at 3830w x 2813h is roughly equates to a face 2.5% larger overall than the existing sign face. By reducing the sign x-height to 123mm however, the overall dimensions drop to 3742w x 2813h which is around 1% less than the existing sign area.

Subject to the agreement and approval by National Highways it may therefore be possible to provide a replacement sign face which reuses the existing 2no. RHS post arrangement. Contingent upon confirmation, an assessment of the existing signposts may determine whether a replacement sign face can be accommodated within the capacity of the existing post load.

A replacement sign face also provides opportunity to amend the displayed information at this location to include “Tamworth” to correlate with upstream signs.

There is existing VRS in this location. A new assembly (if deemed necessary) would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Intervention F18

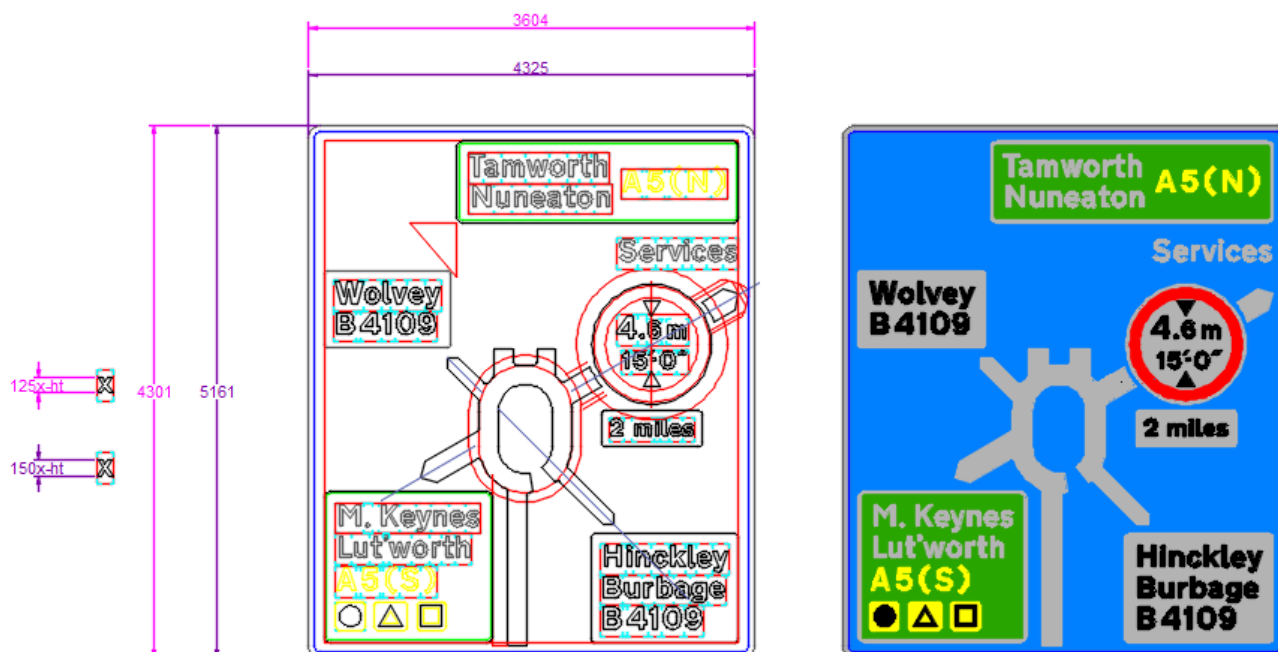
Replace EXLS11 new sign face PRLS06;

A new replacement ADS sign face is proposed to replace EXLS11 to incorporate the legend “Services” and to direct drivers to the new service area at Hinckley from the roundabout.

Replace EXLS11 Install new ADS sign face PRLS06 or Full new assembly to replace EXLS11;

Ref	Approx Sign Location	Existing sign face image	Intervention detail
PRLS06 (EXLS11)	M69 northbound Exit slip road primary ADS sign		Option 1 Replacement sign face at 125mm x-ht mounted on existing posts Option 2 Full new sign assembly PRLS06 new sign face and new post/s and foundations

It is proposed to install a new sign face to replace the existing ADS onto the existing 2no. rectangular hollow section posts. The new sign face layout design should be such that the proposed overall area of the sign does not exceed the existing sign dimensions so that no additional load will be exerted on the post and foundation assembly, thereby negating the need to fully replace. The existing sign dimensions require confirmation.



A replacement sign face will also provide opportunity to correct existing errors with regard to the incorporated tactical diversion symbols. The tactical diversion symbols should be associated with the relevant route number to be followed and contained within the relevant panel.

The proposed sign face layout is calculated to likely be taller than the existing sign face. It may be possible to mount the proposed replacement sign face at a slightly lower height than the existing sign to accommodate the additional sign face height. Contingent upon confirmation, an assessment of the existing signposts may determine whether a replacement sign face can be accommodated within the capacity of the existing post load.

The slip road is national speed limit on approach to the roundabout. An x-height of 150mm would be more appropriate for this sign on the assumption that the likely 85th percentile vehicle speed on approach to the sign is at or between 51 and 60 mph given road geometry and expectation of drivers slowing having exited the motorway main alignment (refer to TSM Ch7 Appendix E – row 5, column 3, lower value). Contingent upon confirmation, the existing sign proportions suggest an x-ht of 125mm has been used on the existing sign face however.

There is existing VRS in this location and as such the post type would not require a passive safety performance class. A full new assembly would therefore not require a passively safe structure either, although good practice would be to specify passively safe posts regardless.

Intervention F19

Replace EXLS12 Full new assembly PRLS07;

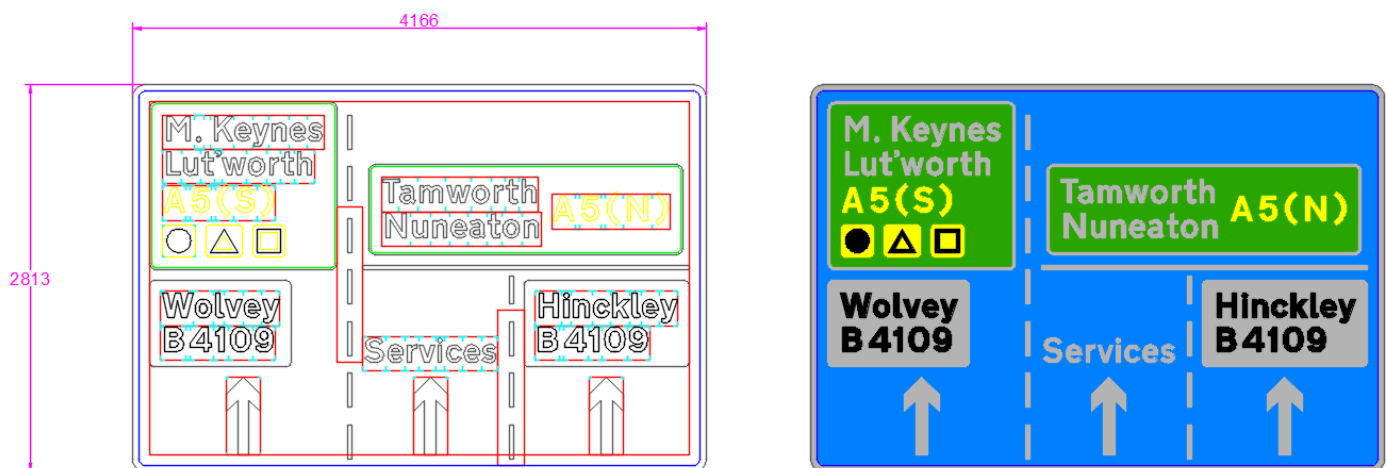
National Highways comments suggest that there are concerns with regard to the addition of a patch incorporating the legend “Serv” to this sign both due to its age and general poor condition. There is concern that differences in the retroreflectivity of newer and older materials contained within the same sign face may be more apparent to drivers.

Existing posts appear to be rusted and as such their performance and life span may be negatively affected. It is therefore proposed to install a full replacement sign assembly.

Replace EXLS12 Install Full new assembly to replace PRLS07;

Ref	Approx Sign Location	Existing sign face image	Intervention detail
PRLS07 (EXLS12)	M69 southbound Exit slip road appropriate lane sign		Full new assembly New sign face and new post/s and foundations PRLS07

A full replacement assembly also provides opportunity to amend the displayed information at this location and include both “Lut’worth” and “Tamworth” to correlate with upstream signs.



It is noted that the existing roundabout ADS sign (EXLS9 to be replaced by PRLS06) on this approach also displays 3 associated tactical diversion symbols (‘filled circle’, ‘open square’, and ‘open triangle’). This is not consistent with the upstream mainline ADSs however (which indicate only ‘open square’). There is however a “secret sign” located approximately 50m upstream of the ‘100 yards’ countdown marker and this may display other tactical diversion information including ‘filled circle’, and ‘open triangle’ routes to be followed.

There is existing VRS in this location. A new assembly would not require a passively safe structure however good practice would be to specify passively safe posts regardless.

Intervention F20

Patch or replace EXLS5 new sign face or replacement assembly PRLS08;

It may be possible to overlay a portion of the existing sign with an adhesive patch containing legend “Services” on a blue panel rather than necessitating a full sign face replacement.

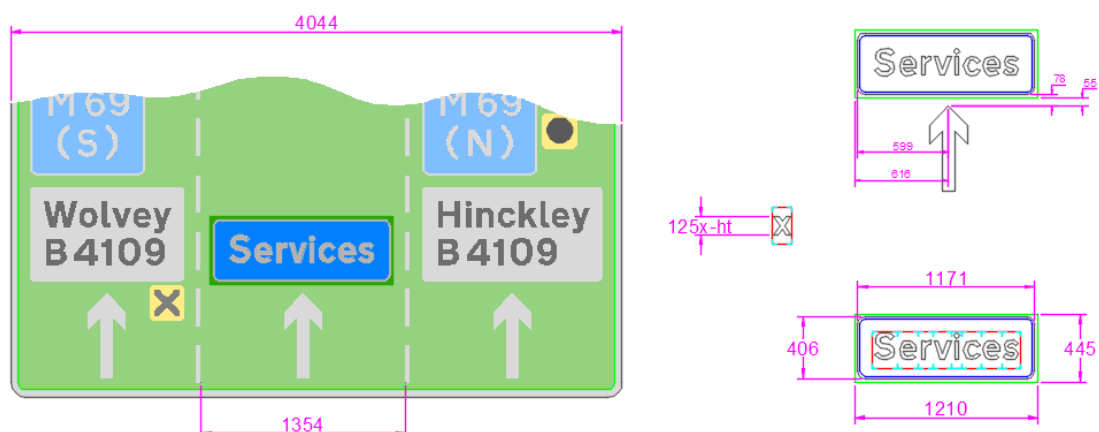
National Highways comments suggest that there may be concerns with regard to the addition of a patch incorporating the panel and legend “Services” given that there may be differences in the retroreflectivity of newer and older materials contained within the same sign face.

Patch with panel or replacement sign face or replacement assembly PRLS08 to replace EXLS5;

Ref	Approx Sign Location	Existing sign face image	Intervention detail
PRLS08 (EXLS5)	A5 westbound Appropriate lane sign located in central reserve		Option 1 Patch with appropriate panel Option 2 Replacement sign face at 100mm x-ht mounted on existing posts Option 3 Full new sign assembly PRLS08 new sign face and new post/s and foundations

A new replacement upstream ADS sign face is proposed to replace EXLS4 to incorporate the legend “Services” and to direct drivers to the new service area at Hinckley from the roundabout.

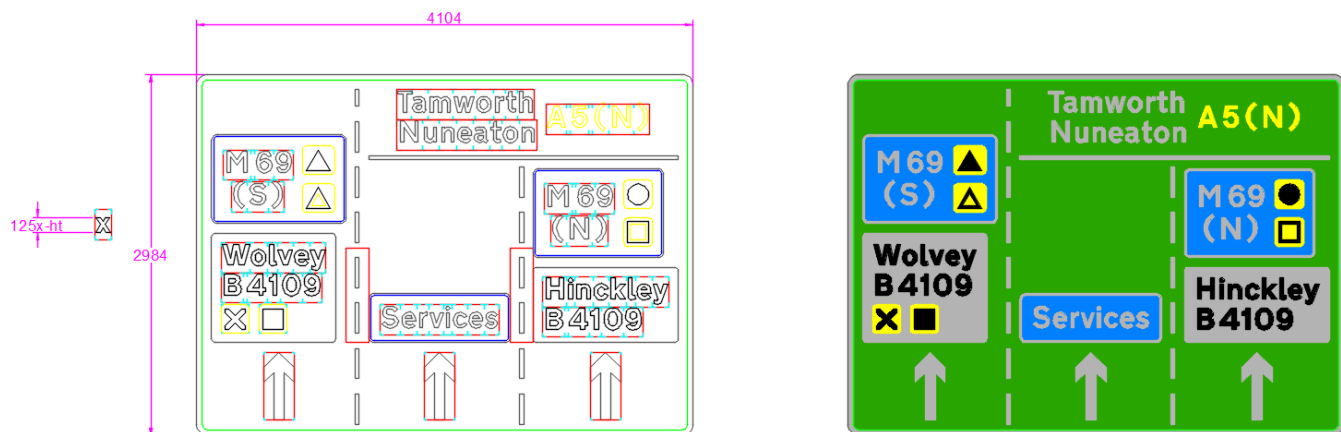
Contingent upon confirmation, an assessment of this existing sign EXLS5 condition and with the assumption being that the plate design is mostly in-line with the relevant guidance and dimensions from TSRGD and TSM, the central lane width on the existing sign should be sufficient to accommodate a retrofit patch incorporating a white-on-blue panel including the legend “Services”.



An assessment of the existing sign assumes that the sign has been designed following most of the set-out rules from TSM Ch7 with an x-height of 125mm (appropriate lower value for an 85th percentile approach speed between 41 and 50mph).

The sign dimensions and resultant width of the middle lane is an approximation; however it is likely that the middle lane is wide enough to accommodate the full legend “Services” on a panel.

A replacement sign face would however provide opportunity to amend the contained errors with some sign elements displayed. It appears that the sign has at some point been retro-fit with tactical diversion symbols. The tactical diversion symbols should be associated with the relevant route number to be followed and contained within the relevant panel. Amending this on a replacement sign face would also provide continuity on signage through and on approach to the junction.



Directional information displayed could also be amended to include “Tamworth” to correlate with other upstream signs.

Contingent upon confirmation, an assessment of the existing signposts may determine whether a replacement sign face can be accommodated within the capacity of the existing post load. It is not known whether the existing 3no. posts are deemed passively safe.

It would be recommended that if new posts are to be provided that the new sign be mounted on a passively safe assembly given the likely 85th percentile vehicle speed in both directions at this location being at or around 45mph. The posted speed limit is 50mph and the 85th percentile approach speed is likely to fall between 41 and 50mph

There is no existing VRS in the central reserve on the off-side roundabout approach in this location. The eastbound exit from the roundabout has VRS.

Intervention F21

Install new Directional sign PRLS09 at A5 Western arm exit below EXLS5;

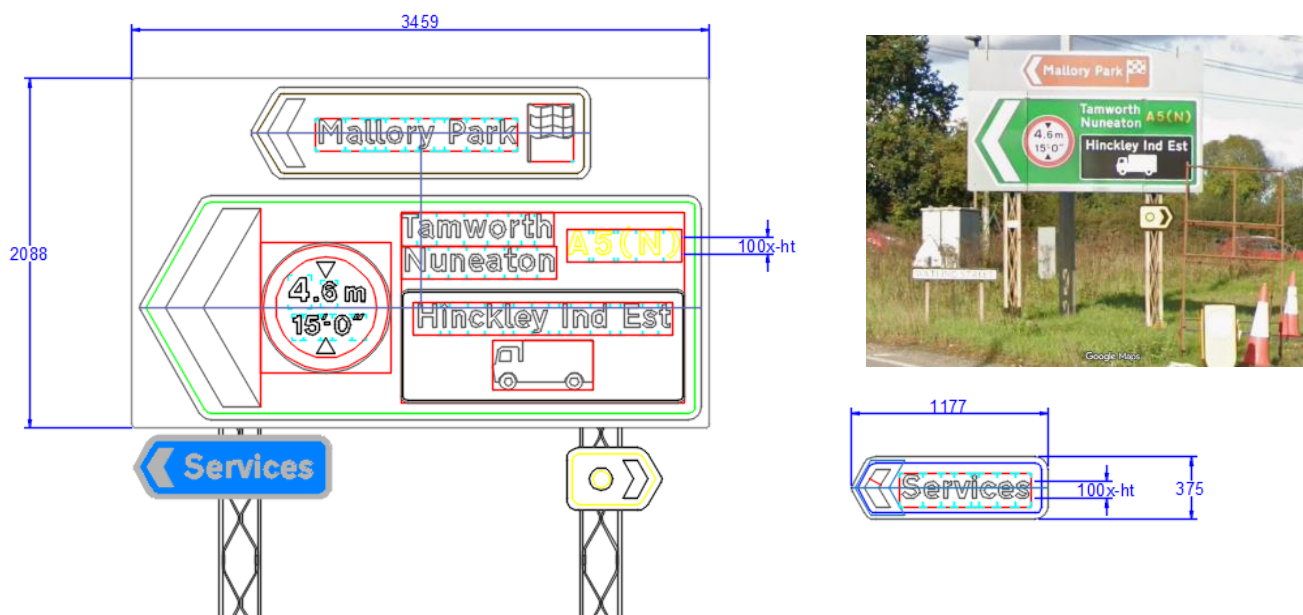
The MSA may be signed in advance on the all-purpose trunk road (APTR) roads. A new directional sign to direct drivers to the service area at Hinckley will therefore be required.

Ref	Approx Sign Location	New sign face	Intervention detail
PRLS09	A5 northwest bound exit from roundabout junction between M69 / A5 / B4109. To be located on diverge nose and mounted below existing sign face on existing left hand post EXLS5.		New sign face PRLS09 to be mounted on left most existing post.

A directional sign indicating the route to the new MSA should be provided on the local road network. Where “Services” or “Geographical name services” is incorporated into a directional sign this should be in a blue panel.

It is proposed to install a separate new sign onto the existing directional sign assembly located on the nose of the central splitter island at the A5 northbound exit from the roundabout.

An assessment of the existing sign assembly proportions as viewed on Google Streetview would suggest that the signs are installed with an x-height of 100mm. This assessment is based on the assumption that the existing signs have been designed following most or all of the set-out rules from TSM Ch7. This would need to be confirmed prior to new sign fabrication.



The existing sign face is mounted on two passively safe Lattix posts. It is proposed that the new sign be mounted on left most existing post under the existing sign plate.

Additional direction signs are to be installed at the new access junction. These signs will be provided as part of the wider Section 278 accommodation agreement.

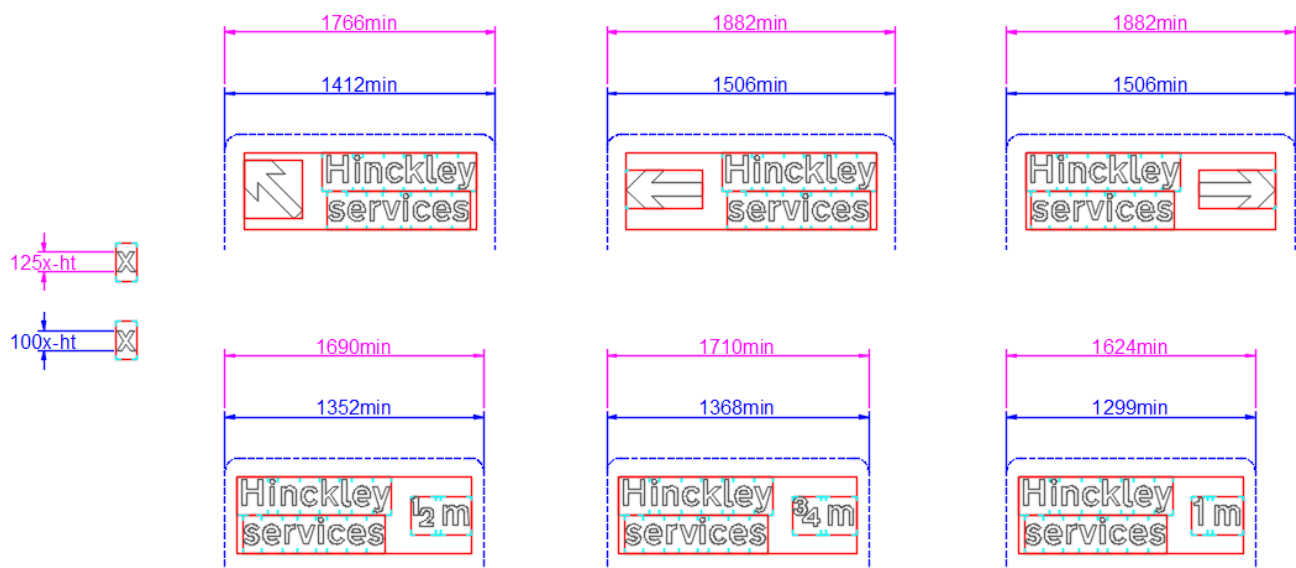
Intervention F22

Full New assembly PRSS01;

The MSA may be signed in advance on the all-purpose trunk road (APTR) approach roads. New signing to direct drivers to the service area at Hinckley will therefore be required on both of the A5 approaches to J1 of the M69.

Permitted variants of the sign allow for a distance to be displayed or for the sign to incorporate an arrow. Symbols to TSRGD Schedule 12 Part 24 to reflect the facilities available at the services may be provided on these signs. Proposed sign widths may vary depending on the layout of displayed facilities and the symbols incorporated into the sign. (To be confirmed by Welcome Break).

Where the arrangement of symbols (whether on a single line or two lines) is such that the geographical name legend and associated distance (or direction as indicated by an arrow) constitutes the widest sign element, the minimum sign width for a relevant x-ht is shown below.



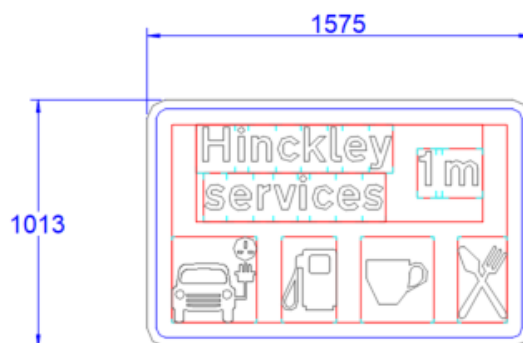
A sign indicating the distance of 1 mile to the new MSA, incorporating symbols to reflect the facilities available at the services may be provided on the local road network.

It is proposed to install the sign approximately 150m east of the roundabout junction at Logix Park (A5 / Logix Road / Sketchley Lane). Available verge width and space within the highway boundary closer to the site appears (from Streetview) to be insufficient to accommodate the installation of a sign to these dimensions.



Ref	Approx Sign Location	New sign face	Intervention detail
PRSS01	A5 Watling Street eastbound. To be located approximately 1500m west of the new services access junction.		New sign assembly PRSS01. New sign face and new post/s and foundations.

The posted speed limit on A5 Watling Street travelling eastbound from the roundabout at Logix Park on approach to the site is 40mph. An x-height of 100mm would therefore be appropriate for this sign.



In addition to this proposed assembly, the services are to be signed on subsequent ADS signing on approach to the new access junction – Refer to Intervention F14.

Additional direction signs at the new access junction will also be provided as part of the Section 278 accommodation agreement.

It would be recommended that this new sign be mounted on a passively safe posts given the likely 85th percentile vehicle speed in both directions at this location being at or around 40mph. There is no existing VRS in this location.

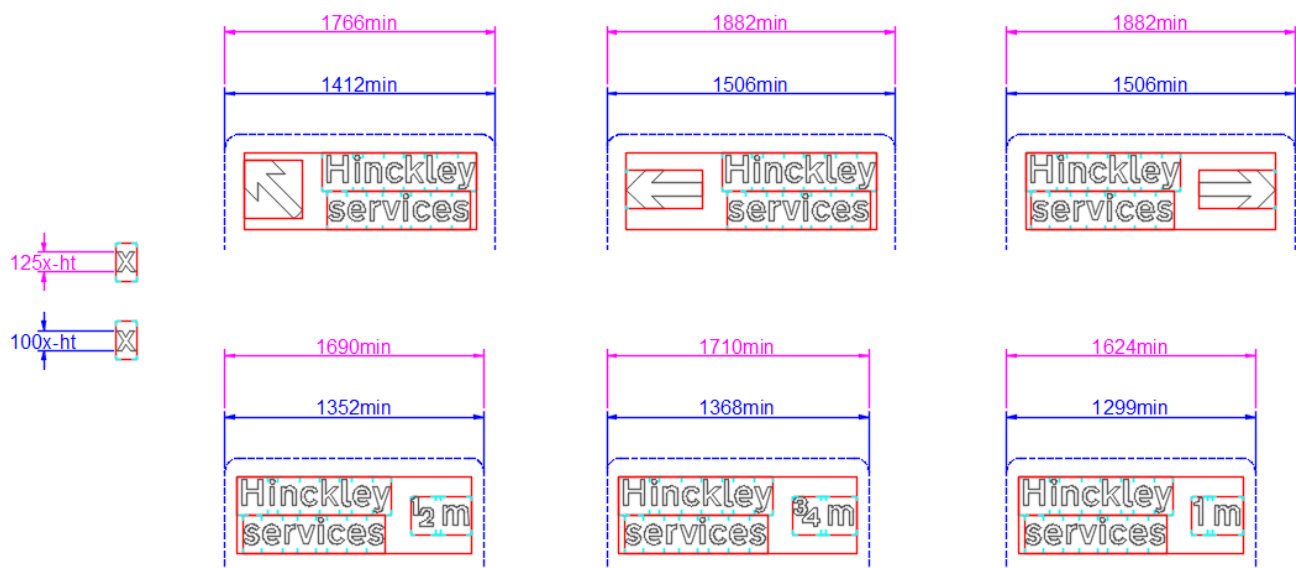
Intervention F23

Full New assembly PRSS02;

The MSA may be signed in advance on the all-purpose trunk road (APTR) approach roads. New signing to direct drivers to the service area at Hinckley will therefore be required on both of the A5 approaches to J1 of the M69.

Permitted variants of the sign allow for a distance to be displayed or for the sign to incorporate an arrow. Symbols to TSRGD Schedule 12 Part 24 to reflect the facilities available at the services may be provided on these signs. Proposed sign widths may vary depending on the layout of displayed facilities and the symbols incorporated into the sign. (To be confirmed by Welcome Break).

Where the arrangement of symbols (whether on a single line or two lines) is such that the geographical name legend and associated distance (or direction as indicated by an arrow) constitutes the widest sign element, the minimum sign width for a relevant x-ht is shown below.



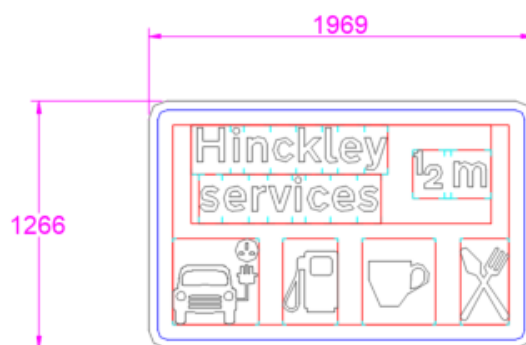
A sign indicating the distance of 1/2 mile to the new MSA, incorporating symbols to reflect the facilities available at the services may be provided on the local road network.

It is proposed to install the sign approximately 550m east of the roundabout junction (M69 / A5 / B4109).



Ref	Approx Sign Location	New sign face	Intervention detail
PRSS02	A5 Watling Street westbound. To be located approximately 550m east of the M69 J1 roundabout junction.		New sign assembly PRSS02. New sign face and new post/s and foundations.

The posted speed limit on A5 Watling Street travelling westbound from the Five Oaks roundabout is 50mph. An x-height of 125mm would therefore be appropriate for this sign.



It would be recommended that the sign be mounted on a passively safe post/s given the likely 85th percentile vehicle approach speed being at or around 50mph. There is no existing VRS in this location.

Intervention F24

Add 12no. road marking text at Stretton Baskerville roundabout junction;

The roundabout circulatory carriageway and approach lanes are marked with worded lane destinations to diagram 1035 - road markings to supplement upright directional signing and aid in directing drivers to the appropriate lane through which to navigate the junction.

There are 12 noted instances where the addition of an appropriate legend could be laid adjacent to these existing markings to provide drivers with additional lane guidance towards the new MSA at Hinckley.

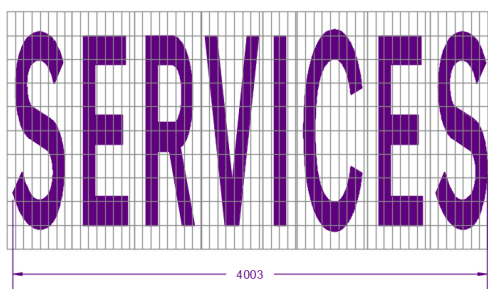
Two sizes are prescribed for the legend text, 1600 mm and 2800 mm. The smaller size is intended to be used where the speed limit is 40 mph or less. The larger size is used where the speed limit is more than 40 mph.

Although abbreviations may be used, these must be understandable not only to local drivers, but also to those unfamiliar with the area.

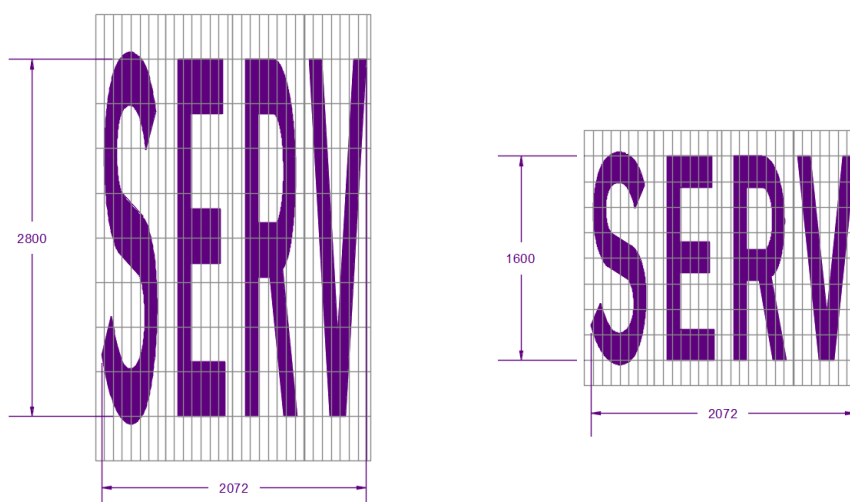
Destinations and direction markings in lanes must match those shown on the relevant upright signs and not contradict them.

The available road lane widths at each of the 12 locations will determine the legend which may be proposed. It is assumed that all traffic lanes within the roundabout circulatory carriageway and on approach to it will be maximum a 3.65m.

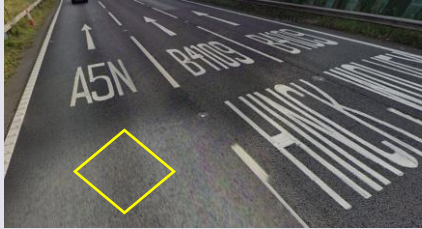
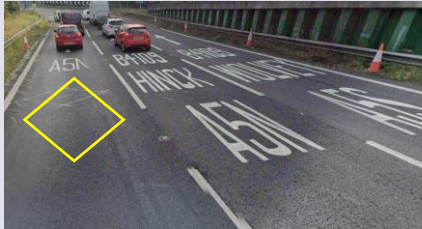
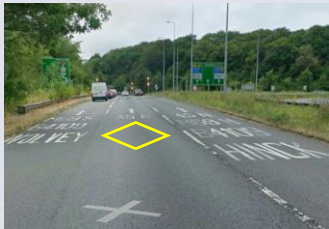
As such the application of full legend “SERVICES” is unlikely to be achievable owing to the overall width of the laid characters being 4003mm.

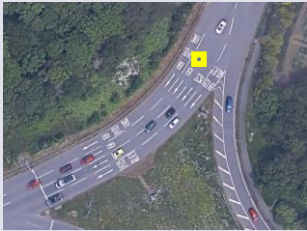


In respect of an applicable abbreviated legend it would be recommended to use legend “SERV” subject to the agreement and approval by both National Highways and the Local Highways Authority.



There are 12 noted instances where the addition of an appropriate legend (character height to match existing) may be laid adjacent to these existing markings to provide drivers with guidance towards the new MSA at Hinckley. The following summarises the proposals to use legend “SERV”:

Ref	Approx Sign Location	Capture from Streetview	Details of additional text
EXRM 1	M69 northbound Exit slip road carriageway text and arrow road markings first set		Add legend “SERV” to lane 1 of 3 on the M69 northbound slip road
EXRM 2	M69 northbound Exit slip road carriageway text and arrow road markings second set		Add legend “SERV” to lane 1 of 3 on the M69 northbound slip road
EXRM 3	M69 southbound Exit slip road carriageway text and arrow road markings first set		Add legend “SERV” to lane 2 of 3 on the M69 southbound slip road
EXRM 4	M69 southbound Exit slip road carriageway text and arrow road markings second set		Add legend “SERV” to lane 2 of 3 on the M69 southbound slip road
EXRM 5	A5 Eastern arm (Westbound approach) carriageway text and arrow road markings first set		Add legend “SERV” to lane 2 of 3 on the A5 eastern arm approach

Ref	Approx Sign Location	Capture from Streetview	Details of additional text
EXRM 6	A5 Eastern arm (Westbound approach) carriageway text and arrow road markings second set		Add legend "SERV" to lane 2 of 3 on the A5 eastern arm approach
EXRM 7	Southeast quadrant circulatory carriageway between A5(E) exit and A5(E) entry text and arrow road markings		Add legend "SERV" to lane 3 of 4 on the circulatory carriageway downstream of A5 eastern arm exit
EXRM 8	Southeast quadrant circulatory carriageway just after A5(E) exit text and arrow road markings		Add legend "SERV" to effective lane 3 of 4 on the circulatory carriageway immediately downstream of A5 eastern arm exit
EXRM 9	Southwest quadrant circulatory carriageway just after M69(S) exit text and arrow road markings		Add legend "SERV" to lane 1 of 3 on the circulatory carriageway immediately downstream of M69 southbound exit
EXRM 10	Southwest quadrant Circulatory carriageway between A4109 exit and entry text and arrow road markings		Add legend "SERV" to lane 2 of 4 on the circulatory carriageway immediately downstream of B4109 southern arm exit

Ref	Approx Sign Location	Capture from Streetview	Details of additional text
EXRM 11	Northwest quadrant circulatory carriageway text and arrow road markings		Add legend “SERV” to lane 1 of 2 at the A5 western arm exit
EXRM 12	West quadrant circulatory carriageway at M69 overbridge text and arrow road markings		Add legend “SERV” to lane 1 of 3 on the circulatory carriageway under M69 overbridge

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Ref. reference. Rev revision. Suit suitability.						

Appendix A

- 110705-PEF-HGN-XX-GSC-H-000001 P03 - SIGNING REQUIREMENTS FOR NEW ROADSIDE FACILITY JUNCTION APPROACH NEW ASSEMBLIES SCHEMATIC LAYOUT
- 110705-PEF-HGN-XX-GSC-H-000002 P03 - SIGNING REQUIREMENTS FOR NEW ROADSIDE FACILITY NEW AND PATCHED SIGNS LOCAL AREA SCHEMATIC LAYOUT
- 110705-PEF-HGN-XX-GSC-H-000003 P03 - SIGNING REQUIREMENTS FOR NEW ROADSIDE FACILITY REPLACEMENT WIDER REGION SIGNING SCHEMATIC LAYOUT