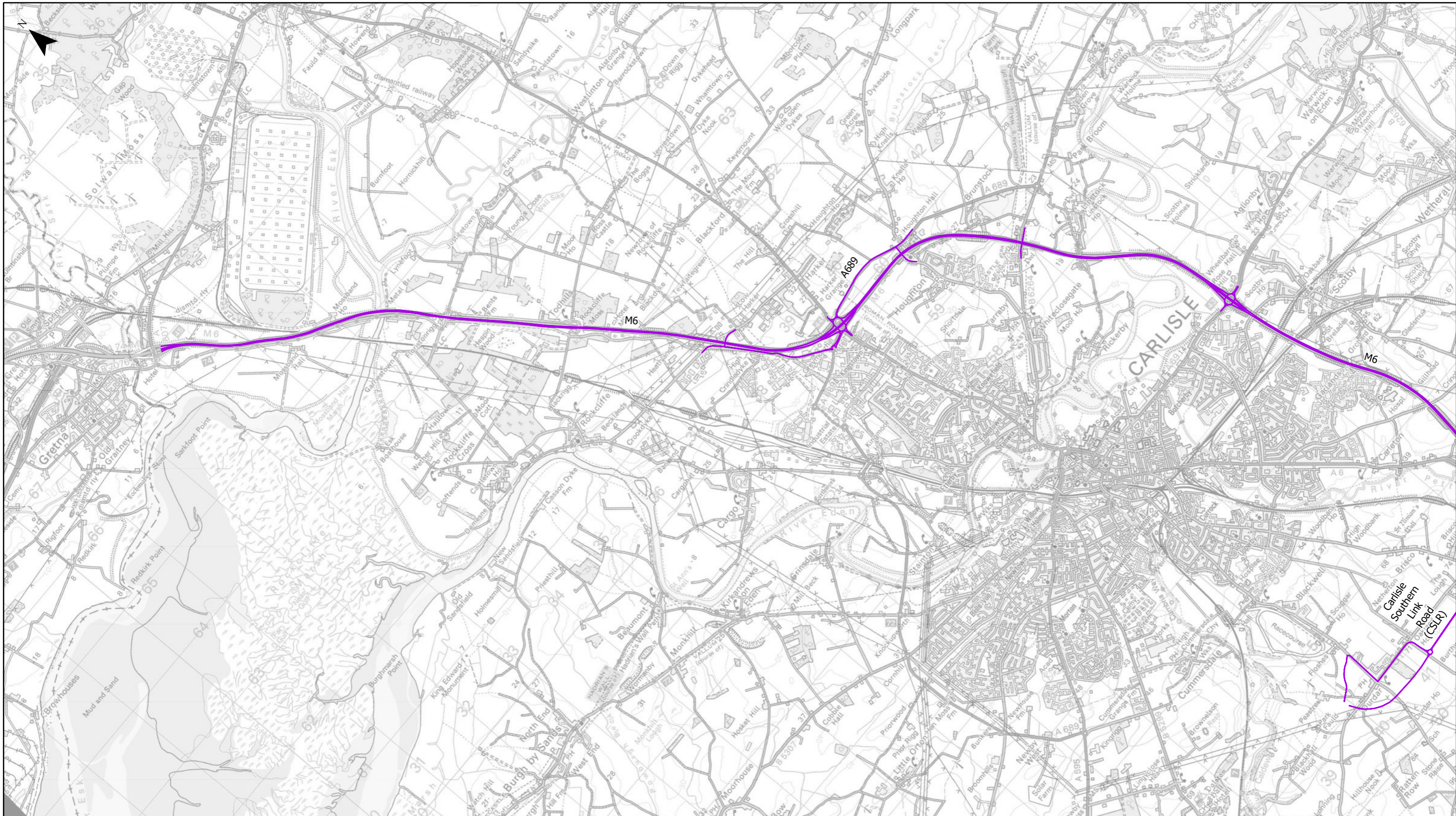
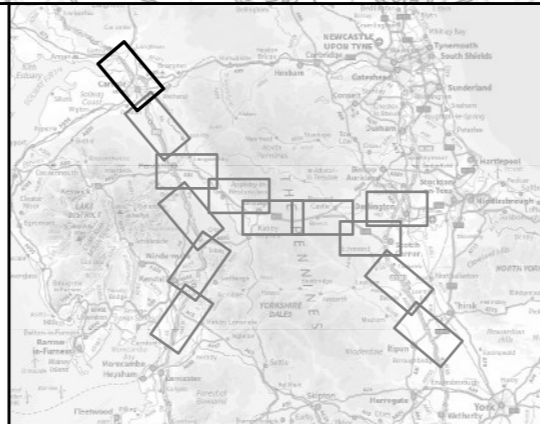


A66 Northern Trans-Pennine

Figures - 05. Air Quality



<ul style="list-style-type: none"> — Scheme Centreline — Black Alternative — Blue Alternative — Orange Alternative — Red Alternative — Affected Road Network (ARN) ★ Monitoring Site 	<p>Ecological Receptor Change in nitrogen deposition relative to lower critical load</p> <ul style="list-style-type: none"> ▲ >1% increase ▲ 0-1% increase ▲ >0% decrease <p>Human Receptor Annual mean NO₂ concentration in Do-Something scenario</p> <ul style="list-style-type: none"> ● >40µg/m³ ● 36-40µg/m³ ● <36µg/m³ 	<p>Designated Site</p> <ul style="list-style-type: none"> ▭ Special Protection Area (SPA) ▭ Special Area of Conservation (SAC) ▭ Site of Special Scientific Interest (SSSI) ▭ County Wildlife Site (CWS) ▭ Local Wildlife Site (LWS) ▭ Nature Improvement Area ▭ Ancient Woodland (AW)
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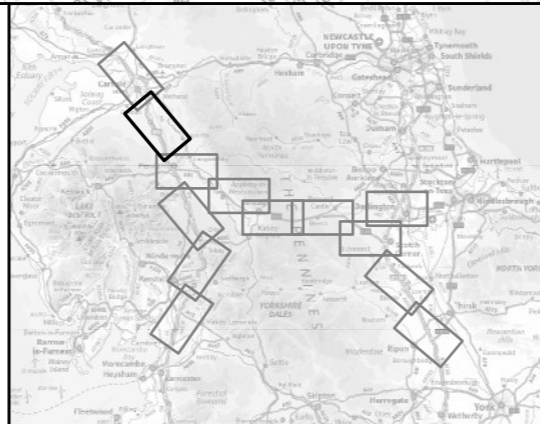
P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

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Project Name A66 Northern Trans-Pennine			
Map Title Figure 5.1 ARN Study Area – Air Quality Constraints and Modelling Results			
Sheet 1 of 13			
Map Number Project	Originator	Volume	
HE565627	AMY	EAQ	
Location		Type	Role
S00		MP	LA
		002000	
Suitability	Suitability Description		Revision
S4	FIT FOR STAGE APPROVAL		P01



<ul style="list-style-type: none"> — Scheme Centreline — Black Alternative — Blue Alternative — Orange Alternative — Red Alternative — Affected Road Network (ARN) ★ Monitoring Site 	<p>Ecological Receptor Change in nitrogen deposition relative to lower critical load</p> <ul style="list-style-type: none"> ▲ >1% increase ▲ 0-1% increase ▲ >0% decrease <p>Human Receptor Annual mean NO₂ concentration in Do-Something scenario</p> <ul style="list-style-type: none"> ● >40µg/m³ ● 36-40µg/m³ ● <36µg/m³ 	<p>Designated Site</p> <ul style="list-style-type: none"> ▭ Special Protection Area (SPA) ▭ Special Area of Conservation (SAC) ▭ Site of Special Scientific Interest (SSSI) ▭ County Wildlife Site (CWS) ▭ Local Wildlife Site (LWS) ▭ Nature Improvement Area ▭ Ancient Woodland (AW)
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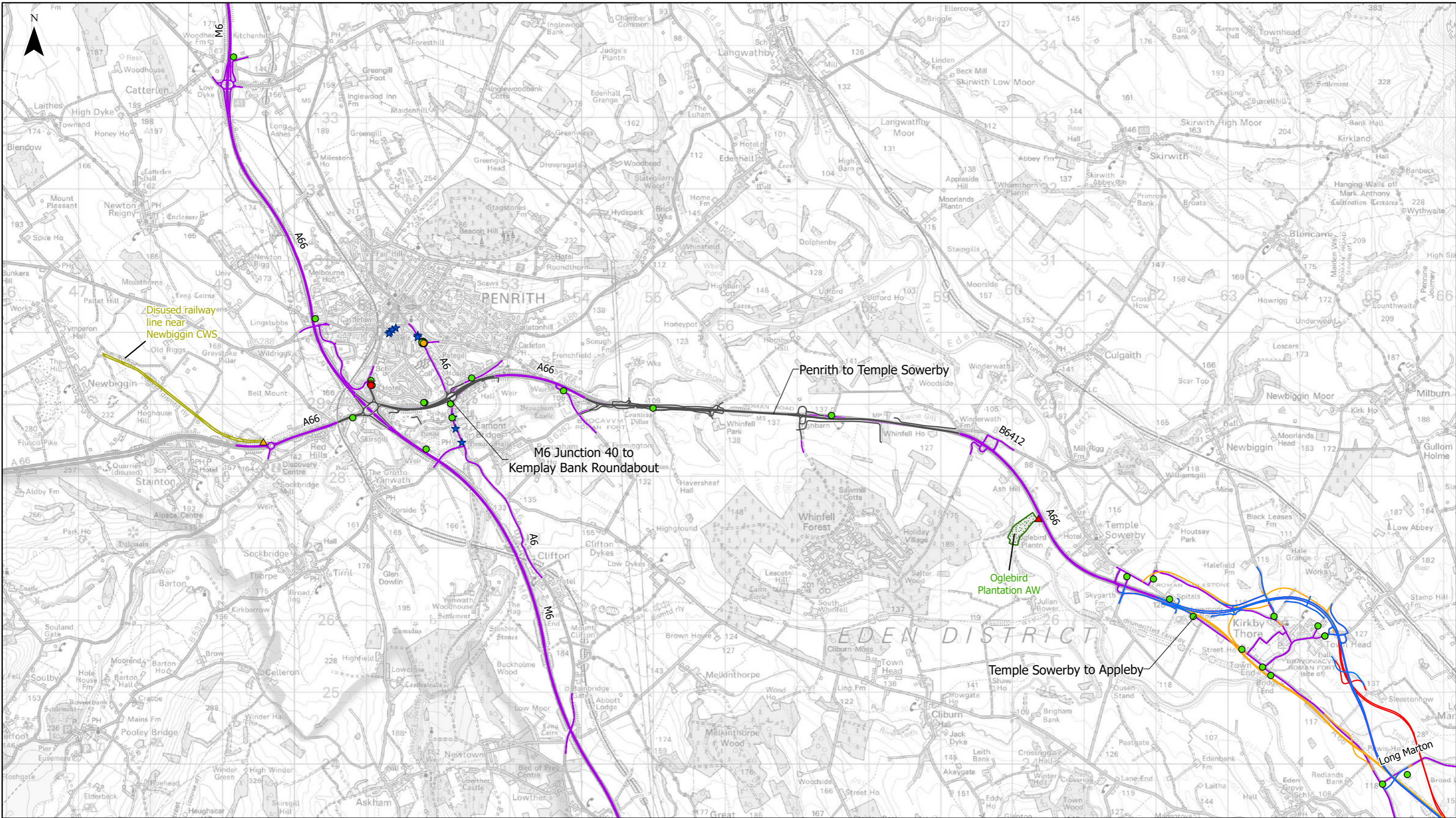
P01	First Issue				
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	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

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Project Name A66 Northern Trans-Pennine			
Map Title Figure 5.1 ARN Study Area – Air Quality Constraints and Modelling Results			
Sheet 2 of 13			
Map Number Project HE565627	Originator - AMY	Volume - EAQ	Location S00
Suitability S4	Suitability Description FIT FOR STAGE APPROVAL		Revision P01

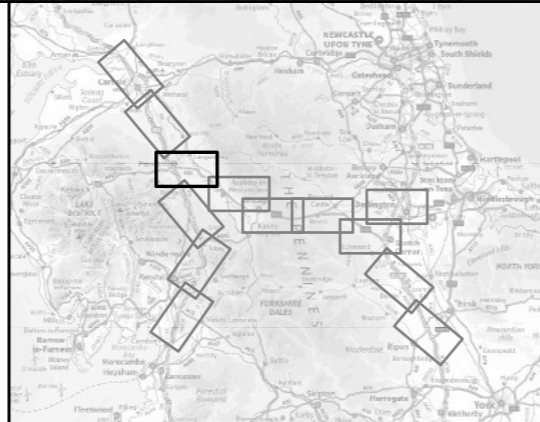


— Scheme Centreline
 — Black Alternative
 — Blue Alternative
 — Orange Alternative
 — Red Alternative
 — Affected Road Network (ARN)
 ★ Monitoring Site

Ecological Receptor
 Change in nitrogen deposition relative to lower critical load
 ▲ >1% increase
 ▲ 0-1% increase
 ▲ >0% decrease

Human Receptor
 Annual mean NO₂ concentration in Do-Something scenario
 ● >40µg/m³
 ● 36-40µg/m³
 ● <36µg/m³

Designated Site
 ▨ Special Protection Area (SPA)
 ▨ Special Area of Conservation (SAC)
 ▨ Site of Special Scientific Interest (SSSI)
 ▨ County Wildlife Site (CWS)
 ▨ Local Wildlife Site (LWS)
 ▨ Nature Improvement Area
 ▨ Ancient Woodland (AW)



highways england **A66 NTP** Integrated Project Team

P01	First Issue	JBAR	MMAT	LHAN	JHOD	KWHA
		12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised	

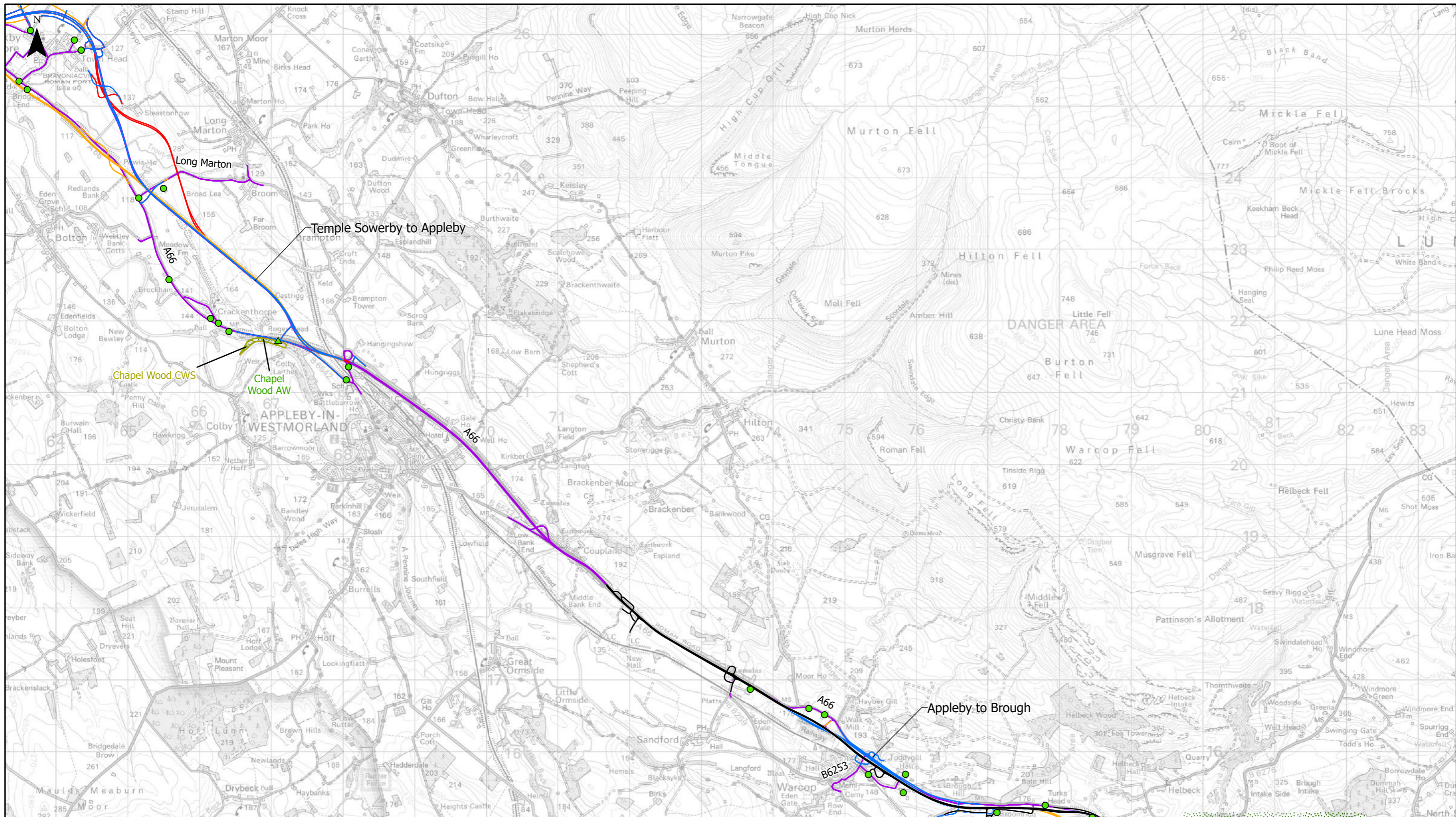
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Project Name
A66 Northern Trans-Pennine

Map Title
Figure 5.1
ARN Study Area – Air Quality Constraints and Modelling Results
Sheet 3 of 13

Map Number	Project	Originator	Volume
HE565627	-	AMY	-
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Suitability	Suitability Description		Revision
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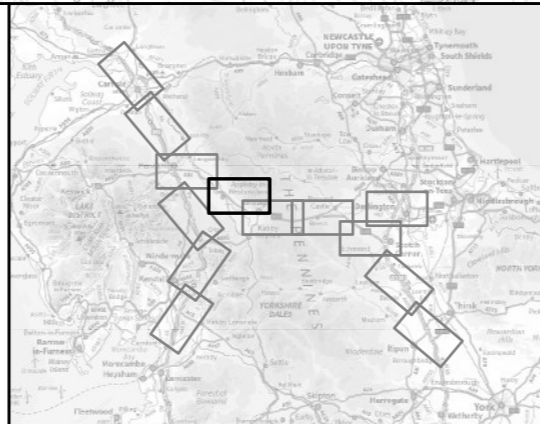


— Scheme Centreline
 — Black Alternative
 — Blue Alternative
 — Orange Alternative
 — Red Alternative
 — Affected Road Network (ARN)
 ★ Monitoring Site

Ecological Receptor
 Change in nitrogen deposition relative to lower critical load
 ▲ >1% increase
 ▲ 0-1% increase
 ▲ >0% decrease

Human Receptor
 Annual mean NO₂ concentration in Do-Something scenario
 ● >40µg/m³
 ● 36-40µg/m³
 ● <36µg/m³

Designated Site
 ▭ Special Protection Area (SPA)
 ▭ Special Area of Conservation (SAC)
 ▭ Site of Special Scientific Interest (SSSI)
 ▭ County Wildlife Site (CWS)
 ▭ Local Wildlife Site (LWS)
 ▭ Nature Improvement Area
 ▭ Ancient Woodland (AW)



P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

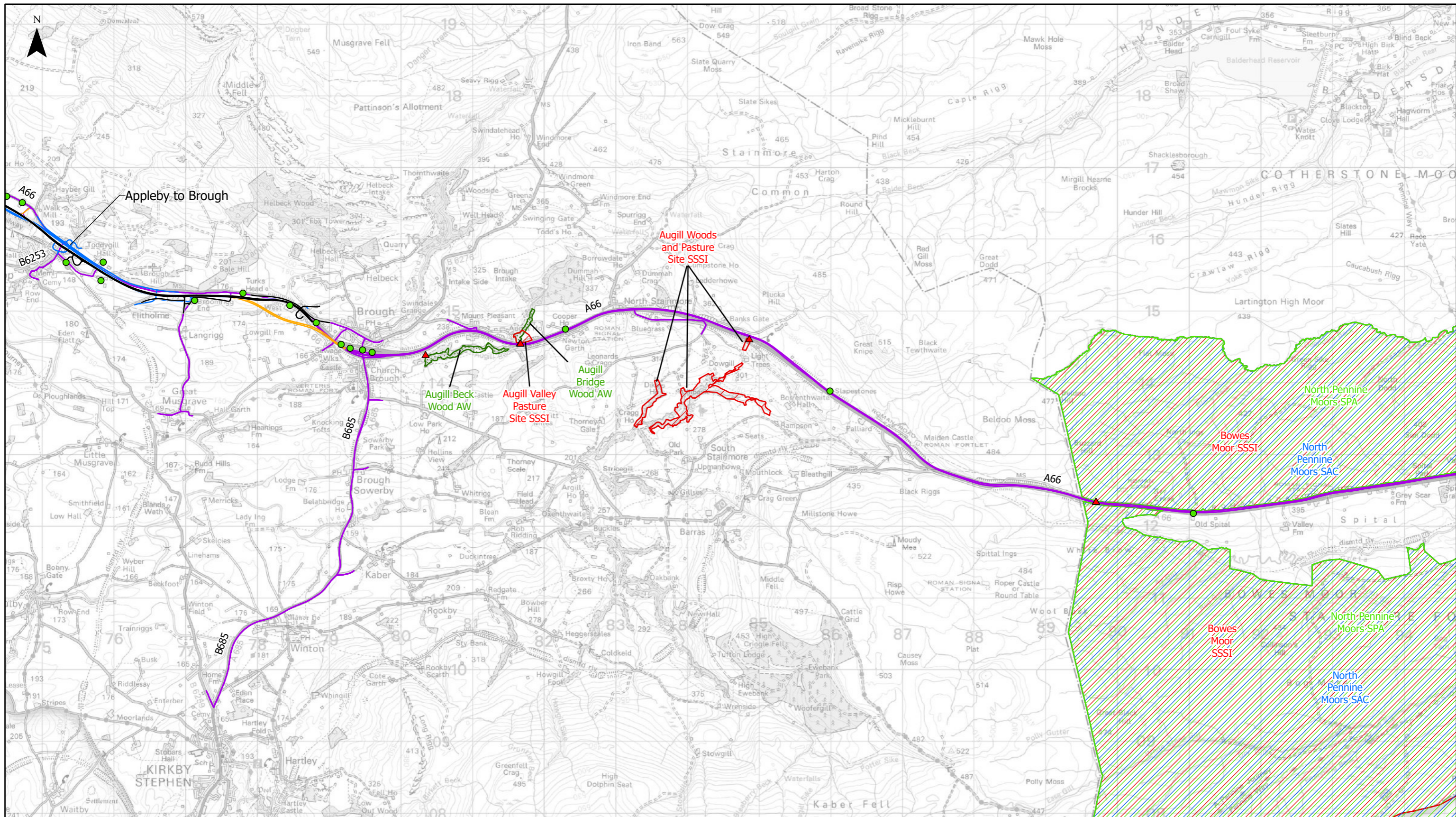
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Project Name
A66 Northern Trans-Pennine

Map Title
Figure 5.1
ARN Study Area – Air Quality Constraints and Modelling Results
 Sheet 4 of 13

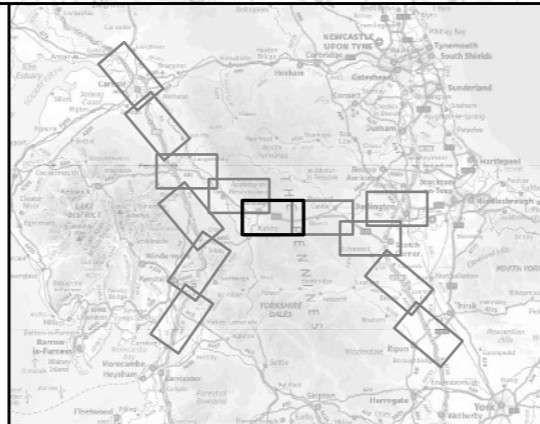
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S00	-	MP - LA	-
Location	Type	Role	Number
S4	FIT FOR STAGE APPROVAL		P01



- Scheme Centreline
- Black Alternative
- Blue Alternative
- Orange Alternative
- Red Alternative
- Affected Road Network (ARN)
- ★ Monitoring Site

- Ecological Receptor**
Change in nitrogen deposition relative to lower critical load
- ▲ >1% increase
 - ▲ 0-1% increase
 - ▲ >0% decrease
- Human Receptor**
Annual mean NO₂ concentration in Do-Nothing scenario
- >40µg/m³
 - 36-40µg/m³
 - <36µg/m³

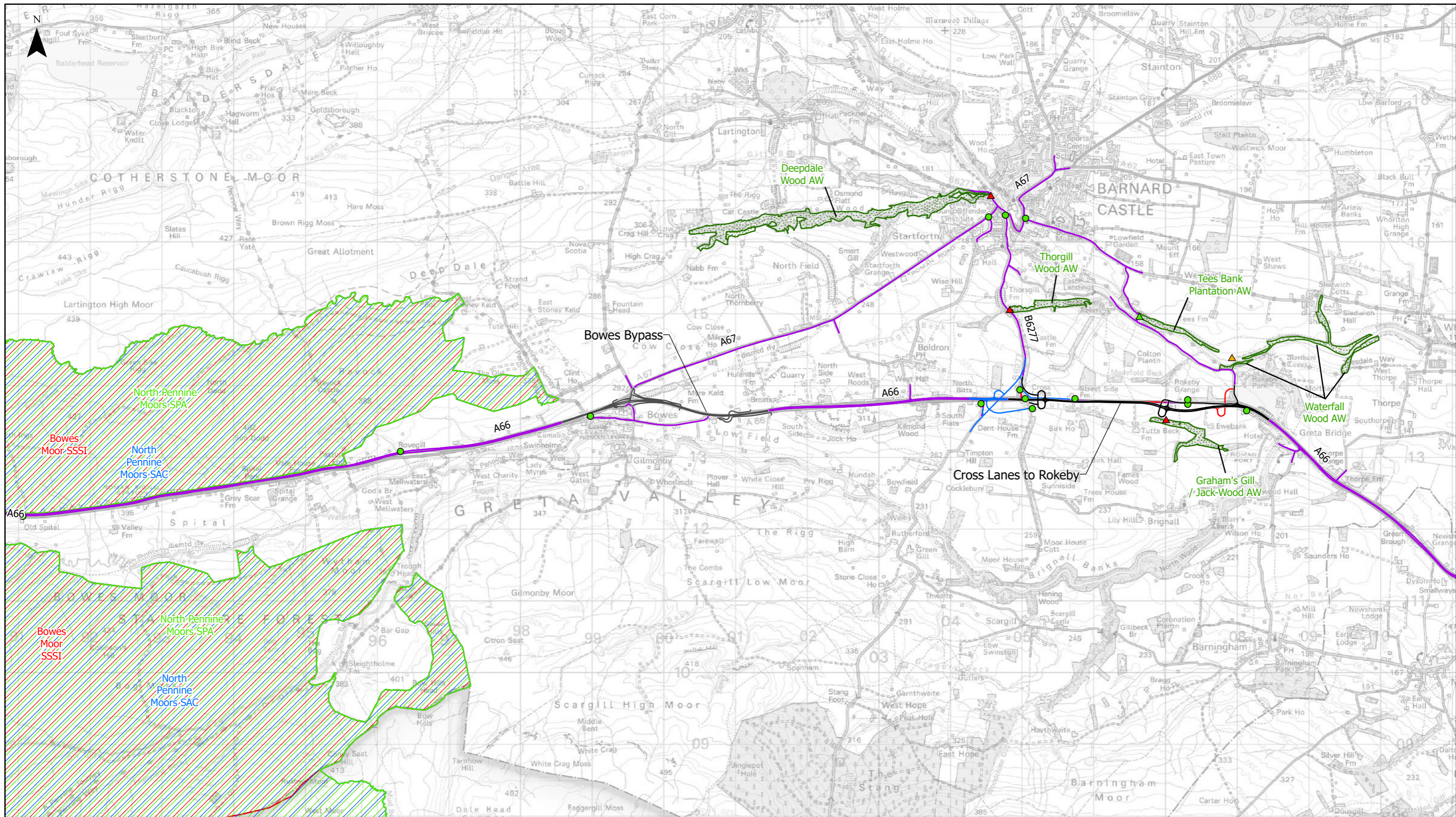
- Designated Site**
- ▭ Special Protection Area (SPA)
 - ▭ Special Area of Conservation (SAC)
 - ▭ Site of Special Scientific Interest (SSSI)
 - ▭ County Wildlife Site (CWS)
 - ▭ Local Wildlife Site (LWS)
 - ▭ Nature Improvement Area
 - ▭ Ancient Woodland (AW)



P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

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Project Name A66 Northern Trans-Pennine			
Map Title Figure 5.1			
ARN Study Area – Air Quality Constraints and Modelling Results			
Sheet 5 of 13			
Map Number Project	Originator	Volume	
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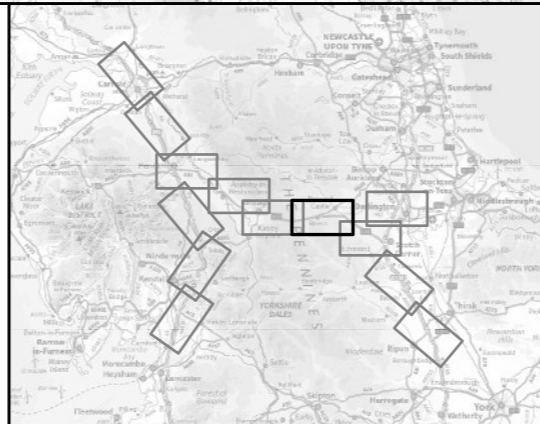


— Scheme Centreline
 — Black Alternative
 — Blue Alternative
 — Orange Alternative
 — Red Alternative
 — Affected Road Network (ARN)
 ★ Monitoring Site

Ecological Receptor
 Change in nitrogen deposition relative to lower critical load
 ▲ >1% increase
 ▲ 0-1% increase
 ▲ >0% decrease

Human Receptor
 Annual mean NO₂ concentration in Do-Something scenario
 ● >40µg/m³
 ● 36-40µg/m³
 ● <36µg/m³

Designated Site
 ▭ Special Protection Area (SPA)
 ▭ Special Area of Conservation (SAC)
 ▭ Site of Special Scientific Interest (SSSI)
 ▭ County Wildlife Site (CWS)
 ▭ Local Wildlife Site (LWS)
 ▭ Nature Improvement Area
 ▭ Ancient Woodland (AW)



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P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

Kilometres
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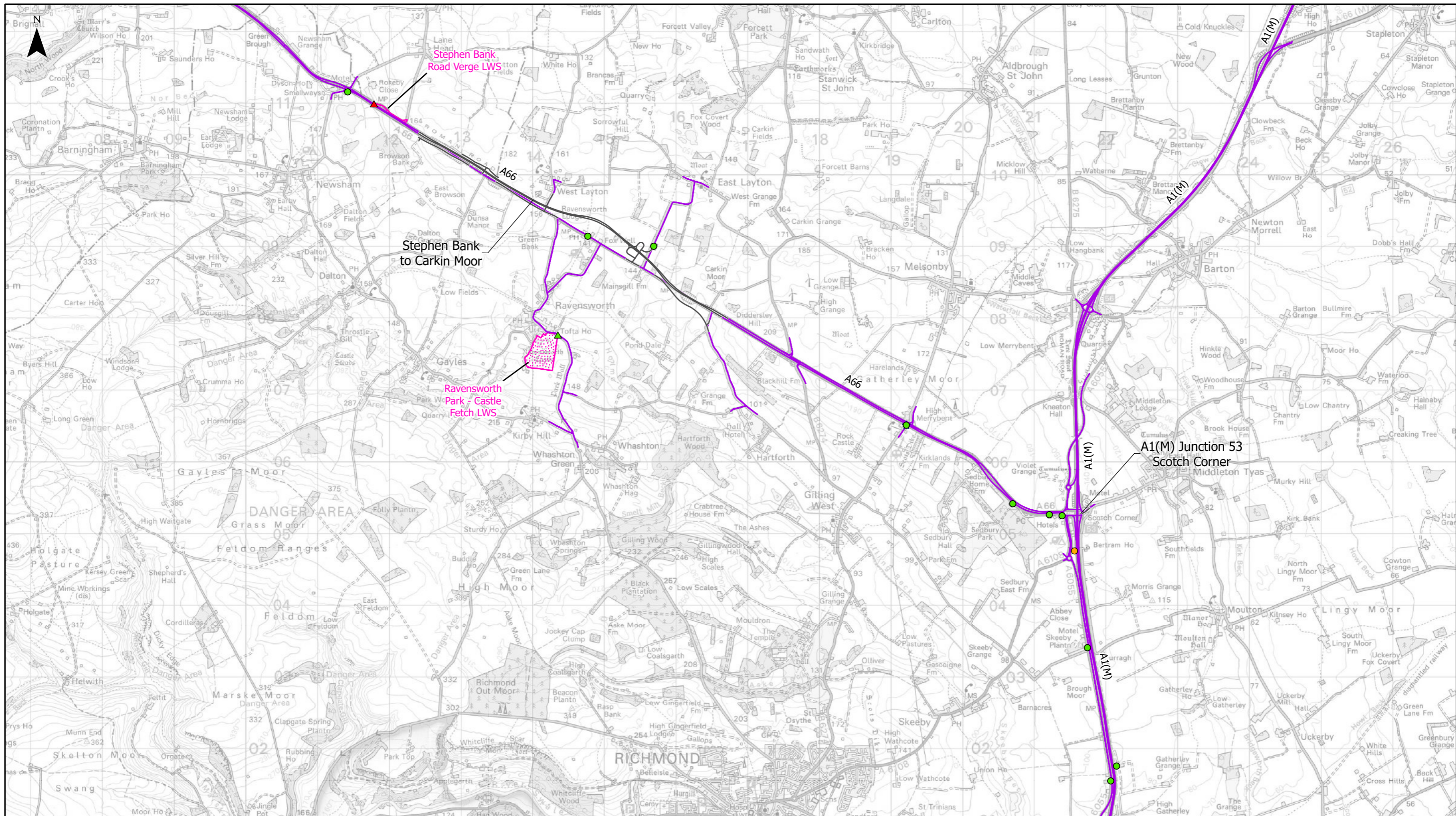
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Project Name
A66 Northern Trans-Pennine

Map Title
**Figure 5.1
 ARN Study Area – Air Quality Constraints
 and Modelling Results**

Sheet 6 of 13

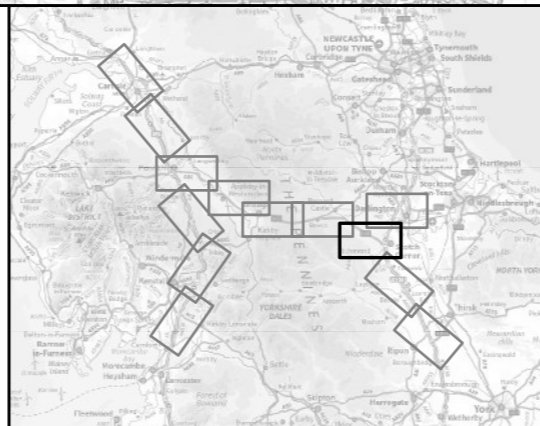
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S00	-	MP - LA	-
Location	Type	Role	Number
Suitability S4	FIT FOR STAGE APPROVAL		Revision P01





- Scheme Centreline
- Black Alternative
- Blue Alternative
- Orange Alternative
- Red Alternative
- Affected Road Network (ARN)
- ★ Monitoring Site

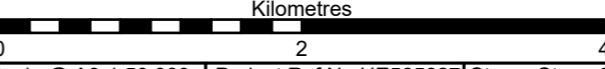
- Ecological Receptor**
Change in nitrogen deposition relative to lower critical load
- ▲ >1% increase
 - ▲ 0-1% increase
 - ▲ >0% decrease
- Human Receptor**
Annual mean NO₂ concentration in Do-Nothing scenario
- >40µg/m³
 - 36-40µg/m³
 - <36µg/m³

- Designated Site**
- ▭ Special Protection Area (SPA)
 - ▭ Special Area of Conservation (SAC)
 - ▭ Site of Special Scientific Interest (SSSI)
 - ▭ County Wildlife Site (CWS)
 - ▭ Local Wildlife Site (LWS)
 - ▭ Nature Improvement Area
 - ▭ Ancient Woodland (AW)



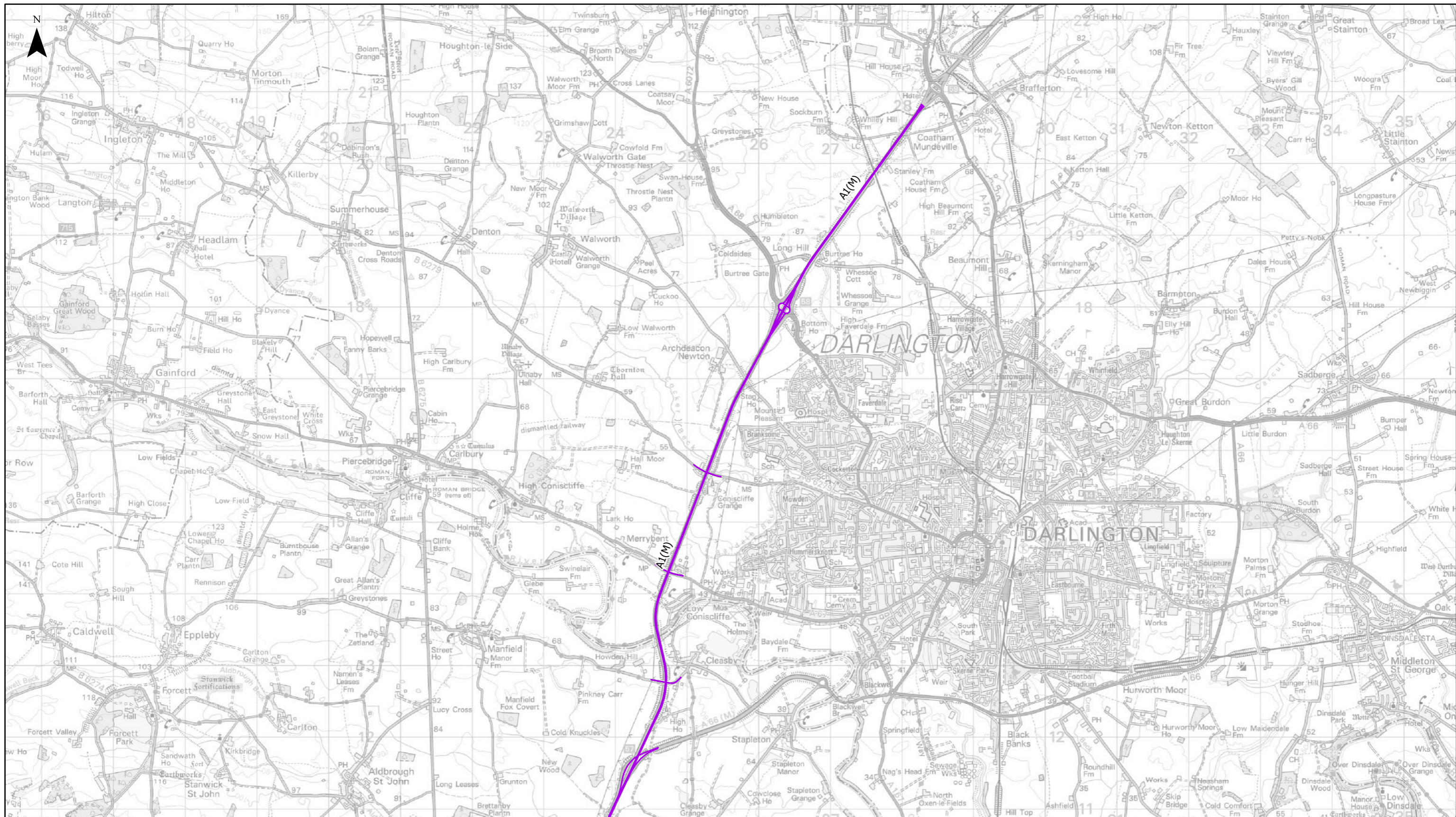



P01	First Issue				
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Revision	Created	Checked	Reviewed	Approved	Authorised



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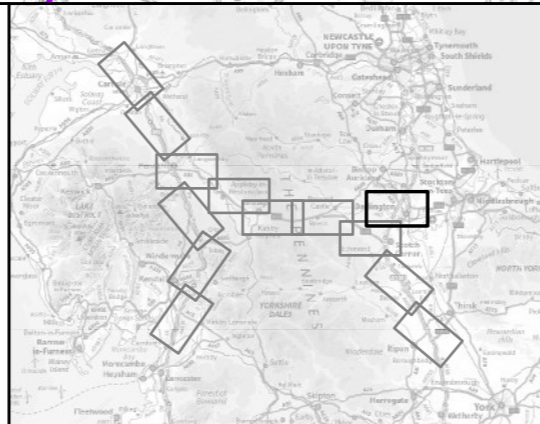
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Sheet 7 of 13			
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S00	MP	LA	002006
Location	Type	Role	Number
Suitability S4	Suitability Description FIT FOR STAGE APPROVAL		Revision P01





- Scheme Centreline
- Black Alternative
- Blue Alternative
- Orange Alternative
- Red Alternative
- Affected Road Network (ARN)
- ★ Monitoring Site

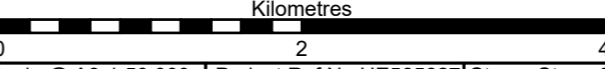
- Ecological Receptor**
Change in nitrogen deposition relative to lower critical load
- ▲ >1% increase
 - ▲ 0-1% increase
 - ▲ >0% decrease
- Human Receptor**
Annual mean NO₂ concentration in Do-Something scenario
- >40µg/m³
 - 36-40µg/m³
 - <36µg/m³

- Designated Site**
- ▭ Special Protection Area (SPA)
 - ▭ Special Area of Conservation (SAC)
 - ▭ Site of Special Scientific Interest (SSSI)
 - ▭ County Wildlife Site (CWS)
 - ▭ Local Wildlife Site (LWS)
 - ▭ Nature Improvement Area
 - ▭ Ancient Woodland (AW)



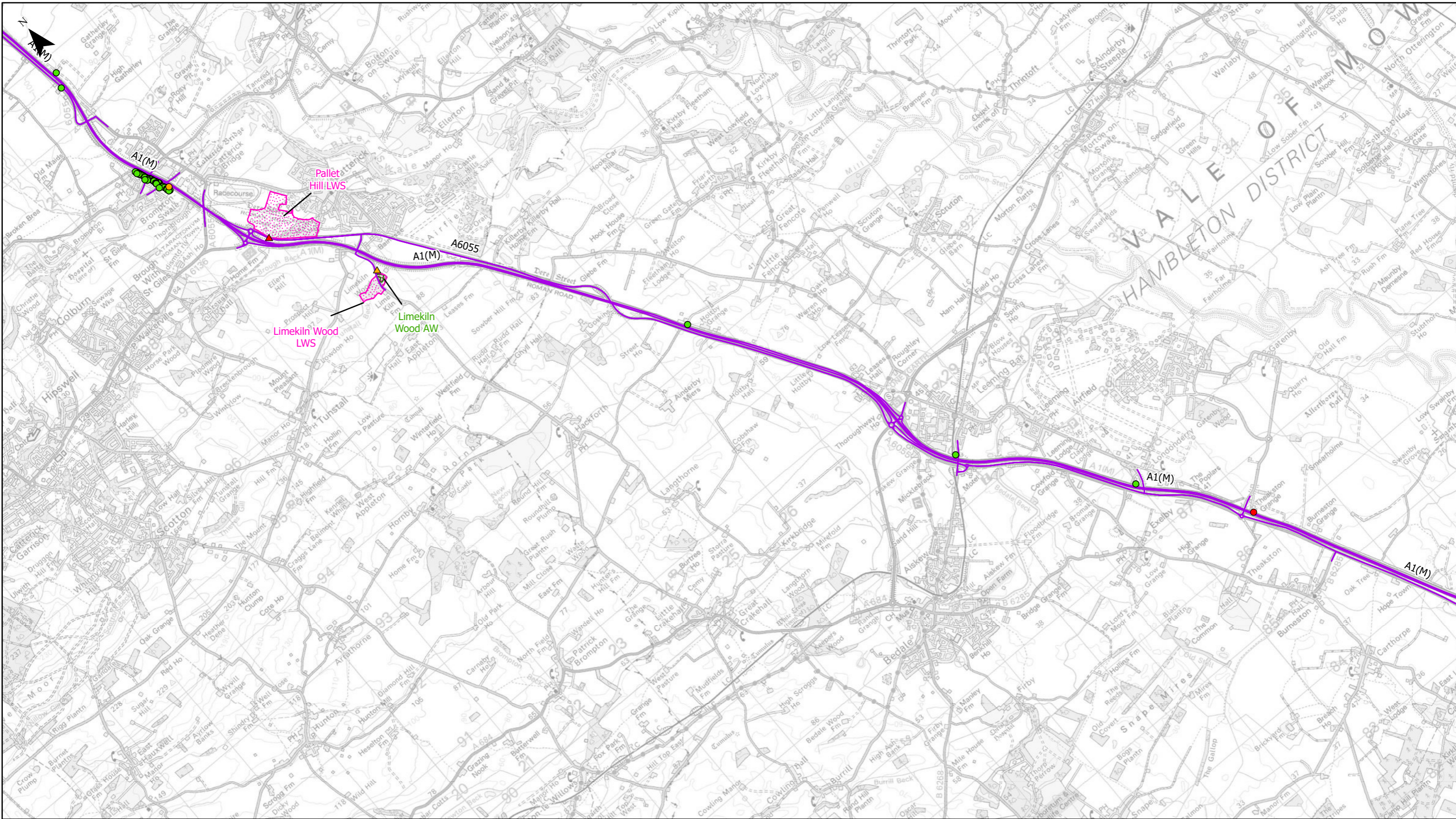



P01	First Issue				
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Revision	Created	Checked	Reviewed	Approved	Authorised



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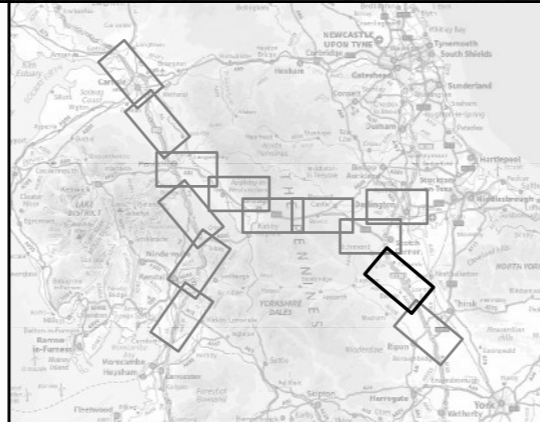
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Sheet 8 of 13			
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S00	MP	LA	002007
Location	Type	Role	Number
Suitability S4	Suitability Description FIT FOR STAGE APPROVAL		Revision P01



— Scheme Centreline
 — Black Alternative
 — Blue Alternative
 — Orange Alternative
 — Red Alternative
 — Affected Road Network (ARN)
 ★ Monitoring Site

Ecological Receptor
 Change in nitrogen deposition relative to lower critical load
 ▲ >1% increase
 ▲ 0-1% increase
 ▲ >0% decrease
Human Receptor
 Annual mean NO₂ concentration in Do-Nothing scenario
 ● >40µg/m³
 ● 36-40µg/m³
 ● <36µg/m³

Designated Site
 ▭ Special Protection Area (SPA)
 ▭ Special Area of Conservation (SAC)
 ▭ Site of Special Scientific Interest (SSSI)
 ▭ County Wildlife Site (CWS)
 ▭ Local Wildlife Site (LWS)
 ▭ Nature Improvement Area
 ▭ Ancient Woodland (AW)



P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

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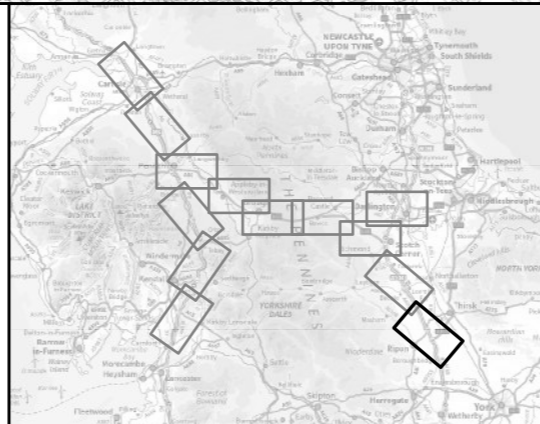
Project Name
A66 Northern Trans-Pennine



Map Title
Figure 5.1
ARN Study Area – Air Quality Constraints and Modelling Results
 Sheet 9 of 13

Map Number	Project	Originator	Volume
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Location	Type	Role	Number
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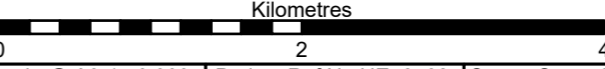


<ul style="list-style-type: none"> — Scheme Centreline — Black Alternative — Blue Alternative — Orange Alternative — Red Alternative — Affected Road Network (ARN) ★ Monitoring Site 	<p>Ecological Receptor Change in nitrogen deposition relative to lower critical load</p> <ul style="list-style-type: none"> ▲ >1% increase ▲ 0-1% increase ▲ >0% decrease <p>Human Receptor Annual mean NO₂ concentration in Do-Nothing scenario</p> <ul style="list-style-type: none"> ● >40µg/m³ ● 36-40µg/m³ ● <36µg/m³ 	<p>Designated Site</p> <ul style="list-style-type: none"> ▭ Special Protection Area (SPA) ▭ Special Area of Conservation (SAC) ▭ Site of Special Scientific Interest (SSSI) ▭ County Wildlife Site (CWS) ▭ Local Wildlife Site (LWS) ▭ Nature Improvement Area ▭ Ancient Woodland (AW)
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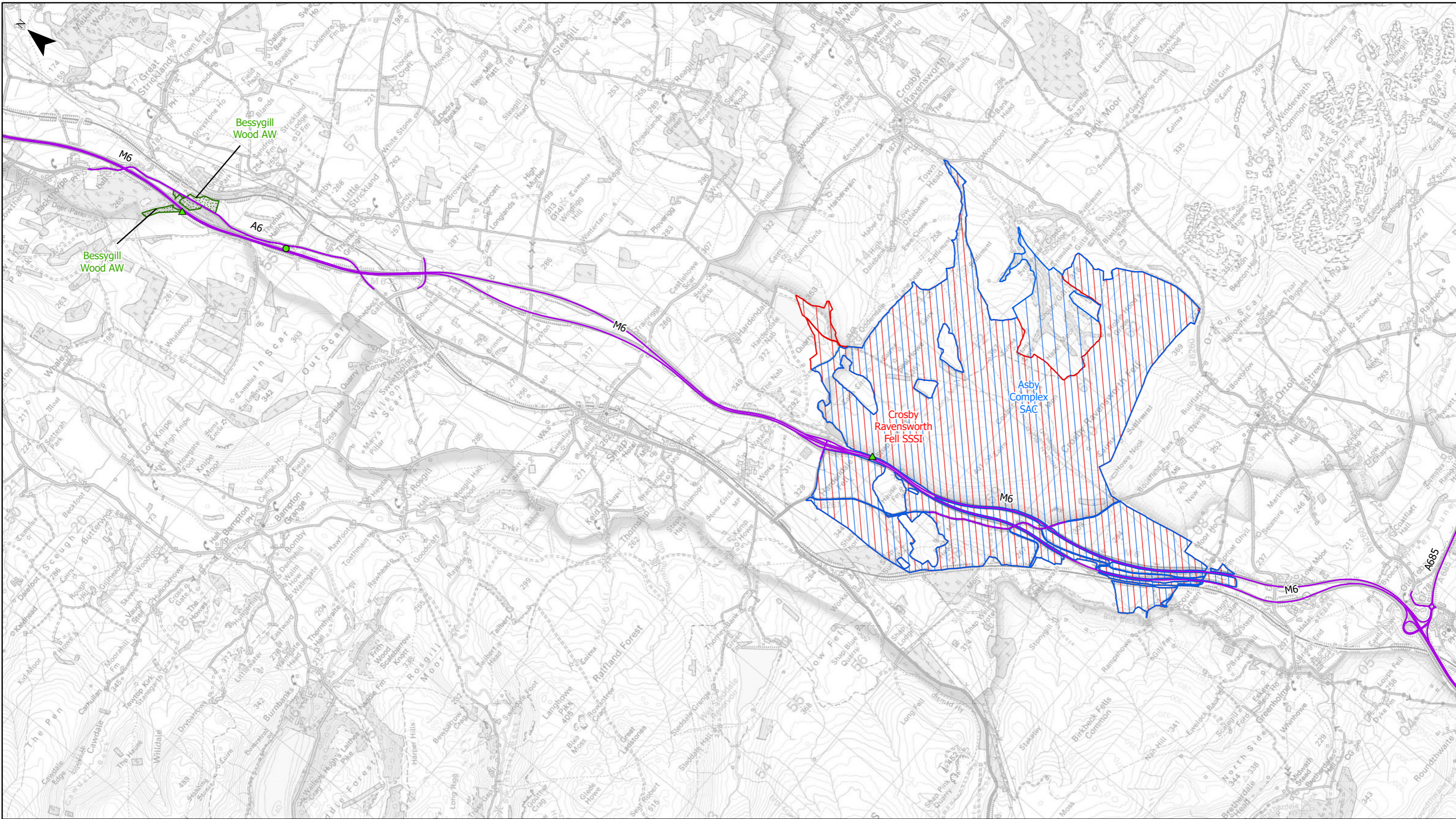



P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised



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Project Name A66 Northern Trans-Pennine			
Map Title Figure 5.1			
ARN Study Area – Air Quality Constraints and Modelling Results			
Sheet 10 of 13			
Map Number	Project	Originator	Volume
HE565627	S00	AMY	EAQ
Location	Type	Role	Number
S4	FIT FOR STAGE APPROVAL	MP - LA	002009
Suitability	Suitability Description	Revision	
S4	FIT FOR STAGE APPROVAL	P01	



Scheme Centreline

- Black Alternative
- Blue Alternative
- Orange Alternative
- Red Alternative
- Affected Road Network (ARN)
- Monitoring Site

Ecological Receptor

Change in nitrogen deposition relative to lower critical load

- >1% increase
- 0-1% increase
- >0% decrease

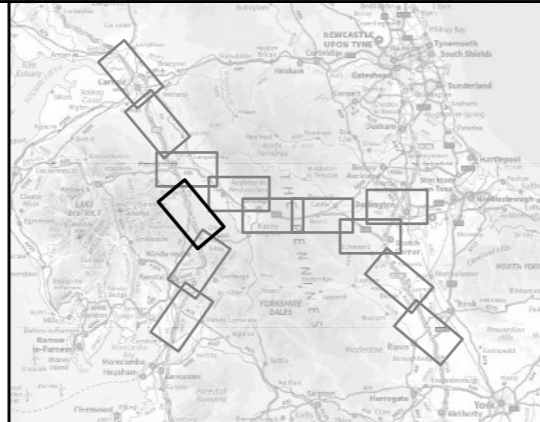
Human Receptor

Annual mean NO₂ concentration in Do-Something scenario

- >40µg/m³
- 36-40µg/m³
- <36µg/m³

Designated Site

- Special Protection Area (SPA)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- County Wildlife Site (CWS)
- Local Wildlife Site (LWS)
- Nature Improvement Area
- Ancient Woodland (AW)



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P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

Kilometres

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Project Name
A66 Northern Trans-Pennine

Map Title
Figure 5.1

ARN Study Area – Air Quality Constraints and Modelling Results

Sheet 11 of 13

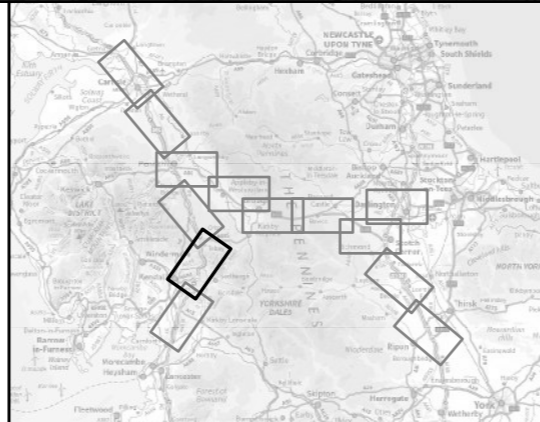
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Suitability S4	FIT FOR STAGE APPROVAL		Revision P01





- Scheme Centreline
- Black Alternative
- Blue Alternative
- Orange Alternative
- Red Alternative
- Affected Road Network (ARN)
- ★ Monitoring Site

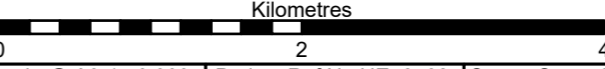
- Ecological Receptor**
Change in nitrogen deposition relative to lower critical load
- ▲ >1% increase
 - ▲ 0-1% increase
 - ▲ >0% decrease
- Human Receptor**
Annual mean NO₂ concentration in Do-Nothing scenario
- >40µg/m³
 - 36-40µg/m³
 - <36µg/m³

- Designated Site**
- ▭ Special Protection Area (SPA)
 - ▭ Special Area of Conservation (SAC)
 - ▭ Site of Special Scientific Interest (SSSI)
 - ▭ County Wildlife Site (CWS)
 - ▭ Local Wildlife Site (LWS)
 - ▭ Nature Improvement Area
 - ▭ Ancient Woodland (AW)



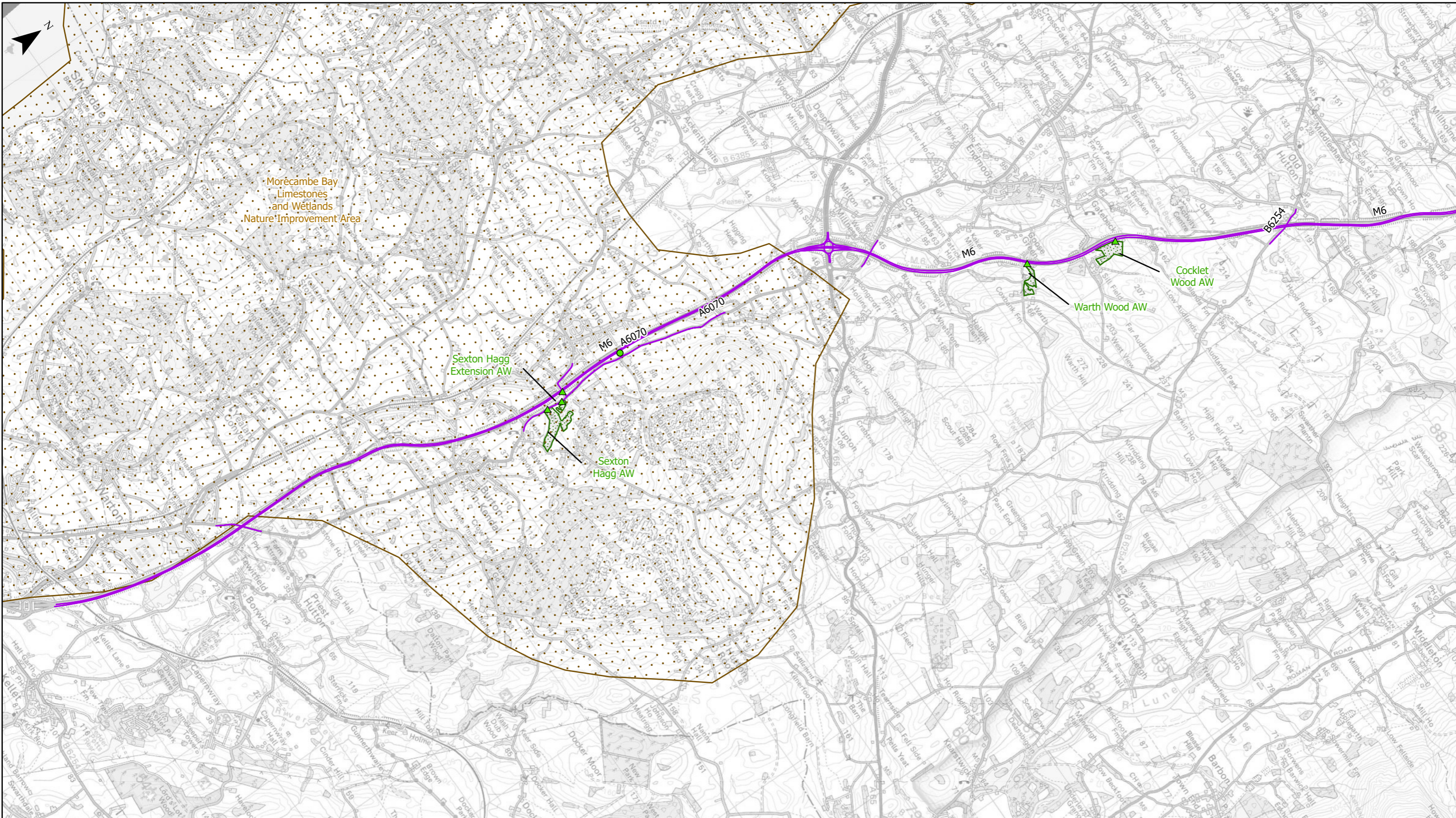



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	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised



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Project Name A66 Northern Trans-Pennine			
Map Title Figure 5.1 ARN Study Area – Air Quality Constraints and Modelling Results			
Sheet 12 of 13			
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HE565627	AMY	EAQ	
Location		Type	Number
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Suitability	Suitability Description		Revision
S4	FIT FOR STAGE APPROVAL		P01

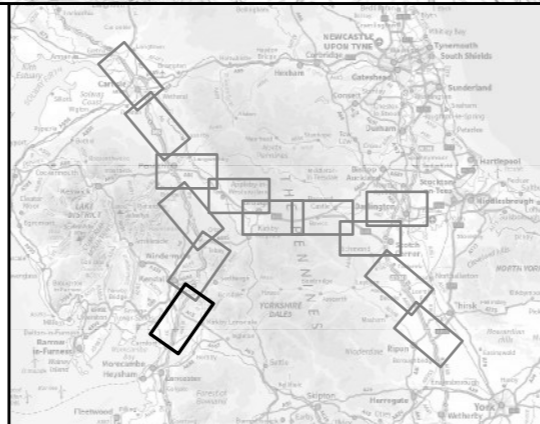


— Scheme Centreline
 — Black Alternative
 — Blue Alternative
 — Orange Alternative
 — Red Alternative
 — Affected Road Network (ARN)
 ★ Monitoring Site

Ecological Receptor
 Change in nitrogen deposition relative to lower critical load
 ▲ >1% increase
 ▲ 0-1% increase
 ▲ >0% decrease

Human Receptor
 Annual mean NO₂ concentration in Do-Nothing scenario
 ● >40µg/m³
 ● 36-40µg/m³
 ● <36µg/m³

Designated Site
 ▭ Special Protection Area (SPA)
 ▭ Special Area of Conservation (SAC)
 ▭ Site of Special Scientific Interest (SSSI)
 ▭ County Wildlife Site (CWS)
 ▭ Local Wildlife Site (LWS)
 ▭ Nature Improvement Area
 ▭ Ancient Woodland (AW)



highways england **A66 NTP** Integrated Project Team

P01	First Issue				
	JBAR	MMAT	LHAN	JHOD	KWHA
	12/08/21	17/08/21	17/08/21	20/08/21	20/08/21
Revision	Created	Checked	Reviewed	Approved	Authorised

Kilometres
 0 2 4

Scale @ A3: 1:50,000 | Project Ref No HE565627 | Stage: Stage 3
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Project Name
A66 Northern Trans-Pennine

Map Title
**Figure 5.1
 ARN Study Area – Air Quality Constraints
 and Modelling Results**

Sheet 13 of 13

Map Number	Project	Originator	Volume
HE565627	-	AMY	-
S00	-	MP - LA	-
Location	Type	Role	Number
S4	FIT FOR STAGE APPROVAL		P01