# **HyNet North West**

# ENVIRONMENTAL STATEMENT (VOLUME III)

# **Appendix 17.11 Summary of Pre-Mitigation Calculated Effects**

HyNet Carbon Dioxide Pipeline DCO

**Planning Act 2008** 

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulations 5(2)(a)

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#### 1. INTRODUCTION

- 1.1.1. This Appendix provides a summary of the calculated environmental effects relating to Traffic and Transport for the DCO Proposed Development. It should be noted that these are calculated effects only and do not consider the following matters:
  - Duration all effects associated with the DCO Proposed Development would be temporary in nature.
  - Baseline traffic and HGV volumes magnitudes of impacts are calculated based on percentage increases in LGV and HGV traffic. Due to the rural nature of many of the sites for proposed infrastructure associated with the DCO Proposed Development, baseline traffics flows – particularly for HGVs – are very low.
  - Absolute increases in LGV and HGV traffic absolute increases in LGVs and HGVs along construction traffic routes are often low however report high percentage increases when compared to low baselines of traffic.
  - Reasonable Worst Case Scenario The project peak month has been assessed. Traffic flows during this period are often significantly higher than for an average month during the construction programme.
- 1.1.2. The impact of these considerations in reporting final residual effects is provided in **Chapter 17 Traffic and Transport (Volume II)**.

#### 2. SEVERANCE

- 2.1.1. Prior to the consideration of mitigation and enhancement measures, and the impact of duration on residual effects, **Table 1** outlines the significance of effects on Severance that could result from increases in construction traffic arising from the DCO Proposed Development.
- 2.1.2. *Major Significant* effects for Severance are forecast at the following locations:
  - B5132 Cryers Lane;
  - Little Stanney Lane;
  - Picton Lane:
  - B5125 (west of Northop Hall AGI centralised compound);
  - Lower Aston Hill BVS Lane;
  - Lleprog Lane;
  - Manor Lane;
  - Racecourse Lane;
  - Little Rake Lane; and
  - Brookside.
- 2.1.3. **Moderate Significant** effects for Severance are forecast at the following locations:
  - B5132 Cryers Lane;
  - Rake Lane;
  - B5129;
  - Starkey Lane;
  - Alt-Goch Lane;
  - Chorlton Lane;
  - Upper Aston Hill BVS Lane;
  - Bryntyrion Road;
  - The B5125 in Hawarden; and
  - Overwood Lane.

Table 1 - Calculated Effects - Severance

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
1	A5117 1	Low	Negligible	Negligible – Not significant
2	A5117 2	Medium	Negligible	Negligible – Not significant
3	B5132 Cryers Lane	Medium	<u>High</u> Medium	Major - Significant Moderate - Significant
4	Little Stanney Lane	Medium	High	Major - Significant
5	Picton Lane	Medium	High	Major - Significant
6	Rake Lane	Low	High	Moderate - Significant
7	A548 Sealand Road	Medium	Negligible	Negligible – Not significant
8	B5129	Low	High	Moderate - Significant
9	B5125 1	Medium	Negligible Low	Negligible – Not significantMinor – Not Significant
10	B5125 2	Medium	High	Major - Significant
11	B5126 Connah's Quay Road	Medium	<u>Low</u> Negligible	<u>Minor Negligible</u> – Not significant
12	A5119 Northop Road 1	Medium	<u>Low</u> Negligible	<u>Minor Negligible</u> – Not significant
13	Ince Lane	Medium	Negligible	Negligible – Not significant
14	Ash Road	Medium	Negligible	Negligible – Not significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
15	Pool Lane	Low	Negligible	Negligible – Not significant
16	Starkey Lane	Low	High	Moderate - Significant
17	Allt-Goch Lane	Low	High	Moderate - Significant
18	Chorlton Lane	Low	High	Moderate - Significant
19	A540	Medium	Negligible	Negligible – Not significant
20	Upper Aston Hill BVS Lane	Low	High	Moderate - Significant
21	Lower Aston Hill BVS Lane	Medium	High	Major - Significant
22	B5123	Medium	Negligible	Negligible – Not significant
23	Bryntyrion Road	Low	High	Moderate - Significant
24	Lleprog Lane	Medium	High	Major - Significant
25	Bryn Emlyn	Medium	Negligible	Negligible – Not significant
26	Ffordd Groes	Medium	Negligible	Negligible – Not significant
27	B5121	Medium	Medium	Moderate - Significant
28	B5122	Medium	Negligible	Negligible – Not significant
29	A5104	Medium	Negligible	Negligible – Not significant
30	Manor Lane	Medium	<u>High</u> Negligible	Major - SignificantNegligible - Notsignificant
31	Little Rake Lane	Medium	High	Major - Significant
32	Brookside	Medium	High	Major - Significant
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Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
33	A5117 4	Medium	Negligible	Negligible – Not significant
34	Overwood Lane	Low	High	Moderate - Significant
35	Racecourse Lane	Medium	High	Major - Significant
36	B5125 4	Medium	Medium	Moderate - Significant
37	A5119 Northop Road 2	Low	Negligible	Negligible – Not significant
38	Pool Lane North	Low	<u>Negligible</u>	Negligible – Not significant

#### 3. FEAR AND INTIMIDATION

- 3.1.1. Prior to the consideration of mitigation and enhancement measures, and the impact of duration on residual effects, **Table 2** outlines the significance of effects on Fear and Intimidation that could result from increases in construction traffic arising from the DCO Proposed Development.
- 3.1.2. *Major Significant* effects for Fear and Intimidation are forecast at the following locations:
  - B5132 Cryers Lane;
  - Little Stanney Lane;
  - Picton Lane;
  - B5125 2 (west of Northop Hall AGI centralised compound);
  - Lower Aston Hill BVS Lane;
  - Lleprog Lane;
  - Manor Lane;
  - Little Rake Lane;
  - Brookside; and
  - Racecourse Lane.
- 3.1.3. *Moderate Significant* effects for Fear and Intimidation are forecast at the following locations:
  - B5132 Cryers Lane;
  - Rake Lane;
  - B5129;
  - Starkey Lane;
  - Alt-Goch Lane;
  - Chorlton Lane:
  - Upper Aston Hill BVS Lane;
  - Bryntyrion Road;
  - The B5125 in Hawarden; and
  - Overwood Lane.

Table 2 - Calculated Effects – Fear and Intimidation

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
1	A5117 1	Low	Negligible	Negligible – Not significant
2	A5117 2	Medium	Negligible	Negligible – Not significant
3	B5132 Cryers Lane	Medium	<u>High</u> Medium	Major - Significant Moderate - Significant
4	Little Stanney Lane	Medium	High	Major - Significant
5	Picton Lane	Medium	High	Major - Significant
6	Rake Lane	Low	High	Moderate - Significant
7	A548 Sealand Road	Medium	Negligible	Negligible – Not significant
8	B5129	Low	High	Moderate - Significant
9	B5125 1	Medium	<u>Negligible</u> <del>Low</del>	Negligible – Not significantMinor – Not Significant
10	B5125 2	Medium	High	Major - Significant
11	B5126 Connahs Quay Road	Medium	Negligible <u>Low</u>	Negligible Minor – Not significant
12	A5119 Northop Road 1	Medium	Negligible <u>Low</u>	<u>Minor Negligible</u> – Not significant
13	Ince Lane	Medium	Negligible	Negligible – Not significant
14	Ash Road	Medium	Negligible	Negligible – Not significant
15	Pool Lane	Low	Negligible	Negligible – Not significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
16	Starkey Lane	Low	High	Moderate - Significant
17	Allt-Goch Lane	Low	High	Moderate - Significant
18	Chorlton Lane	Low	High	Moderate - Significant
19	A540	Medium	Negligible	Negligible – Not significant
20	Upper Aston Hill BVS Lane	Low	High	Moderate - Significant
21	Lower Aston Hill BVS Lane	Medium	High	Major - Significant
22	B5123	Medium	Negligible	Negligible – Not significant
23	Bryntyrion Road	Low	High	Moderate - Significant
24	Lleprog Lane	Medium	High	Major - Significant
25	Bryn Emlyn	Medium	Negligible	Negligible – Not significant
26	Ffordd Groes	Medium	Negligible	Negligible – Not significant
27	B5121	Medium	Medium	Moderate - Significant
28	B5122	Medium	Negligible	Negligible – Not significant
29	A5104	Medium	Negligible	Negligible – Not significant
30	Manor Lane	Medium	<u>High</u> Negligible	<u>Major - Significant</u> Negligible – Not significant
31	Little Rake Lane	Medium	High	Major - Significant
32	Brookside	Medium	High	Major - Significant
33	A5117 4	Medium	Negligible	Negligible – Not significant
34	Overwood Lane	Low	High	Moderate - Significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
35	Racecourse Lane	Medium	High	Major - Significant
36	B5125 4	Medium	Medium	Moderate - Significant
37	A5119 Northop Road 2	Low	Negligible	Negligible – Not significant
<u>38</u>	Pool Lane North	Low	<u>Negligible</u>	Negligible – Not significant

#### 4. PEDESTRIAN AMENITY

- 4.1.1. Prior to the consideration of mitigation and enhancement measures, and the impact of duration on residual effects, **Table 3** outlines the significance of effects on Pedestrian Amenity that could result from increases in construction traffic arising from the DCO Proposed Development.
- 4.1.2. *Major Significant* effects for Pedestrian Amenity are forecast at the following locations:
  - Little Rake Lane;
  - Racecourse Lane; and
  - Lleprog Lane.
- 4.1.3. No *Moderate Significant* effects for Pedestrian Amenity are forecast.

Table 3 - Calculated Effects – Pedestrian Amenity

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
1	A5117 1	Low	Negligible	Negligible – Not significant
2	A5117 2	Medium	Negligible	Negligible – Not significant
3	B5132 Cryers Lane	Medium	Negligible	Negligible – Not significant
4	Little Stanney Lane	Medium	Negligible	Negligible – Not significant
5	Picton Lane	Medium	Negligible	Negligible – Not significant
6	Rake Lane	Low	Negligible	Negligible – Not significant
7	A548 Sealand Road	Medium	Negligible	Negligible – Not significant
8	B5129	Low	Negligible	Negligible – Not significant
9	B5125 1	Medium	Negligible	Negligible – Not significant
10	B5125 2	Medium	Negligible	Negligible – Not significant
11	B5126 Connahs Quay Road	Medium	Negligible	Negligible – Not significant
12	A5119 Northop Road 1	Medium	Negligible	Negligible – Not significant
13	Ince Lane	Medium	Negligible	Negligible – Not significant
14	Ash Road	Medium	Negligible	Negligible – Not significant
15	Pool Lane	Low	Negligible	Negligible – Not significant
16	Starkey Lane	Low	Negligible	Negligible – Not significant
17	Allt-Goch Lane	Low	Negligible	Negligible – Not significant
18	Chorlton Lane	Low	Negligible	Negligible – Not significant
19	A540	Medium	Negligible	Negligible – Not significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
20	Upper Aston Hill BVS Lane	Low	Negligible	Negligible – Not significant
21	Lower Aston Hill BVS Lane	Medium	Negligible	Negligible – Not significant
22	B5123	Medium	Negligible	Negligible – Not significant
23	Bryntyrion Road	Low	Negligible	Negligible – Not significant
24	Lleprog Lane	Medium	High	Major - Significant
25	Bryn Emlyn	Medium	Negligible	Negligible – Not significant
26	Ffordd Groes	Medium	Negligible	Negligible – Not significant
27	B5121	Medium	Negligible	Negligible – Not significant
28	B5122	Medium	Negligible	Negligible – Not significant
29	A5104	Medium	Negligible	Negligible – Not significant
30	Manor Lane	Medium	Negligible	Negligible – Not significant
31	Little Rake Lane	Medium	Low	Minor – Not Significant
32	Brookside	Medium	Negligible	Negligible – Not significant
33	A5117 4	Medium	Negligible	Negligible – Not significant
34	Overwood Lane	Low	Negligible	Negligible – Not significant
35	Racecourse Lane	Medium	High	Major - Significant
36	B5125 4	Medium	Negligible	Negligible – Not significant
37	A5119 Northop Road 2	Low	Negligible	Negligible – Not significant
<u>38</u>	Pool Lane North	Low	Negligible	Negligible – Not significant

#### 5. DRIVER DELAY

- 5.1.1. Prior to the consideration of mitigation and enhancement measures, and the impact of duration on residual effects, **Table 4** outlines the significance of effects on Driver Delay that could result from increases in construction traffic arising from the DCO Proposed Development.
- 5.1.2. *Major Significant* effects for Driver Delay are forecast at the following locations:
  - B5132 Cryers Lane;
  - Little Stanney Lane;
  - Picton Lane;
  - B5125 2 (west of Northop Hall AGI Compound;
  - Lower Aston Hill BVS Lane;
  - Lleprog Lane;
  - Manor Lane;
  - Little Rake Lane;
  - Brookside; and
  - Racecourse Lane;
- 5.1.3. **Moderate Significant** effects for Driver Delay are forecast at the following locations:
  - B5132 Cryers Lane;
  - Rake Lane;
  - B5129;
  - Starkey Lane;
  - Allt-Goch Lane;
  - Chorlton Lane:
  - Upper Aston Hill BVS Lane;
  - Bryntyrion Road;
  - Overwood Lane; and
  - B5125 4 (Hawarden).

Table 4 - Calculated Effects - Driver Delay

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
1	A5117 1	Low	Negligible	Negligible – Not significant
2	A5117 2	Medium	Negligible	Negligible – Not significant
3	B5132 Cryers Lane	Medium	<u>High</u> Medium	Major - Significant Moderate - Significant
4	Little Stanney Lane	Medium	High	Major - Significant
5	Picton Lane	Medium	High	Major - Significant
6	Rake Lane	Low	High	Moderate - Significant
7	A548 Sealand Road	Medium	Negligible	Negligible – Not significant
8	B5129	Low	High	Moderate - Significant
9	B5125 1	Medium	<u>Negligible</u> Low	Negligible – Not significantMinor – Not Significant
10	B5125 2	Medium	High	Major - Significant
11	B5126 Connahs Quay Road	Medium	Negligible Low	Negligible Minor – Not significant
12	A5119 Northop Road 1	Medium	Negligible <u>Low</u>	Negligible Minor – Not significant
13	Ince Lane	Medium	Negligible	Negligible – Not significant
14	Ash Road	Medium	Negligible	Negligible – Not significant
15	Pool Lane	Low	Negligible	Negligible – Not significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
16	Starkey Lane	Low	High	Moderate - Significant
17	Allt-Goch Lane	Low	High	Moderate - Significant
18	Chorlton Lane	Low	High	Moderate - Significant
19	A540	Medium	Negligible	Negligible – Not significant
20	Upper Aston Hill BVS Lane	Low	High	Moderate - Significant
21	Lower Aston Hill BVS Lane	Medium	High	Major - Significant
22	B5123	Medium	Negligible	Negligible – Not significant
23	Bryntyrion Road	Low	High	Moderate - Significant
24	Lleprog Lane	Medium	High	Major - Significant
25	Bryn Emlyn	Medium	Negligible	Negligible – Not significant
26	Ffordd Groes	Medium	Negligible	Negligible – Not significant
27	B5121	Medium	Medium	Moderate - Significant
28	B5122	Medium	Negligible	Negligible – Not significant
29	A5104	Medium	Negligible	Negligible – Not significant
30	Manor Lane	Medium	<u>High</u> Negligible	Major - Significant Negligible - Not significant
31	Little Rake Lane	Medium	High	Major - Significant
32	Brookside	Medium	High	Major - Significant
33	A5117 4	Medium	Negligible	Negligible – Not significant
34	Overwood Lane	Low	High	Moderate - Significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
35	Racecourse Lane	Medium	High	Major - Significant
36	B5125 4	Medium	Medium	Moderate - Significant
37	A5119 Northop Road 2	Low	Negligible	Negligible – Not significant
<u>38</u>	Pool Lane North	Low	<u>Negligible</u>	Negligible – Not significant

#### 6. PEDESTRIAN DELAY

- 6.1.1. Prior to the consideration of mitigation and enhancement measures, and the impact of duration on residual effects, **Table 5** outlines the significance of effects on Pedestrian Delay that could result from increases in construction traffic arising from the DCO Proposed Development.
- 6.1.2. **No** *Major Significant* effects for Pedestrian Delay are forecast for pedestrian delay.
- 6.1.3. *Moderate Significant* effects for Pedestrian Amenity are forecast at the following locations:
  - A5117 2;
  - B5132 Cryers Lane;
  - Little Stanney Lane;
  - A548 Sealand Road;
  - B5125 1;
  - B5125 2;
  - B5126 Connahs Quay Road;
  - A5119 Northop Road 1;
  - Ince Lane:
  - Ash Road:
  - A540;
  - Lower Aston Hill BVS Lane;
  - Upper Aston Hill BVS Lane;
  - Bryn Emlyn;
  - Ffordd Groes;
  - B5121;
  - B5122;
  - A5104;
  - Manor Lane:
  - Brookside:
  - A5117 4; and
  - B5125 4.

Table 5 - Calculated Effects – Pedestrian Delay

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
1	A5117 1	Low	Medium	Minor – Not Significant
2	A5117 2	Medium	Medium	Moderate - Significant
3	B5132 Cryers Lane	Medium	Medium	Moderate - Significant
4	Little Stanney Lane	Medium	Medium	Moderate - Significant
5	Picton Lane	Medium	Negligible	Negligible – Not significant
6	Rake Lane	Low	Medium	Minor – Not Significant
7	A548 Sealand Road	Medium	Medium	Moderate - Significant
8	B5129	Low	Medium	Minor – Not Significant
9	B5125 1	Medium	Medium	Moderate - Significant
10	B5125 2	Medium	Medium	Moderate - Significant
11	B5126 Connahs Quay Road	Medium	Medium	Moderate - Significant
12	A5119 Northop Road 1	Medium	Medium	Moderate - Significant
13	Ince Lane	Medium	Medium	Moderate - Significant
14	Ash Road	Medium	Medium	Moderate - Significant
15	Pool Lane	Low	Medium	Minor – Not Significant
16	Starkey Lane	Low	Negligible	Negligible – Not significant
17	Alt-Goch Lane	Low	Negligible	Negligible – Not significant
18	Chorlton Lane	Low	Negligible	Negligible – Not significant
19	A540	Medium	Medium	Moderate - Significant

Ref.	Link	Link Sensitivity	Magnitude	Pre-Mitigation Effect
20	Upper Aston Hill BVS Lane	Low	Medium	Minor – Not Significant
21	Lower Aston Hill BVS Lane	Medium	Medium	Moderate - Significant
22	B5123	Medium	Medium	Moderate - Significant
23	Bryntyrion Road	Low	Medium	Minor – Not Significant
24	Lleprog Lane	Medium	Negligible	Negligible – Not significant
25	Bryn Emlyn	Medium	Medium	Moderate - Significant
26	Ffordd Groes	Medium	Medium	Moderate - Significant
27	B5121	Medium	Medium	Moderate - Significant
28	B5122	Medium	Medium	Moderate - Significant
29	A5104	Medium	Medium	Moderate - Significant
30	Manor Lane	Medium	Medium	Moderate - Significant
31	Little Rake Lane	Medium	Negligible	Negligible – Not significant
32	Brookside	Medium	Medium	Moderate - Significant
33	A5117 4	Medium	Medium	Moderate - Significant
34	Overwood Lane	Low	Negligible	Negligible – Not significant
35	Racecourse Lane	Medium	Negligible	Negligible – Not significant
36	B5125 4	Medium	Medium	Moderate - Significant
37	A5119 Northop Road 2	Low	Medium	Minor – Not Significant
38	Pool Lane North	Low	Medium	Minor - Not Significant

## 7. HIGHWAY SAFETY

7.1.1. An assessment of the impact of additional LGV and HGV traffic associated with the DCO Proposed Development is presented in **Appendix 17.3 PIA Summary** (Volume III).