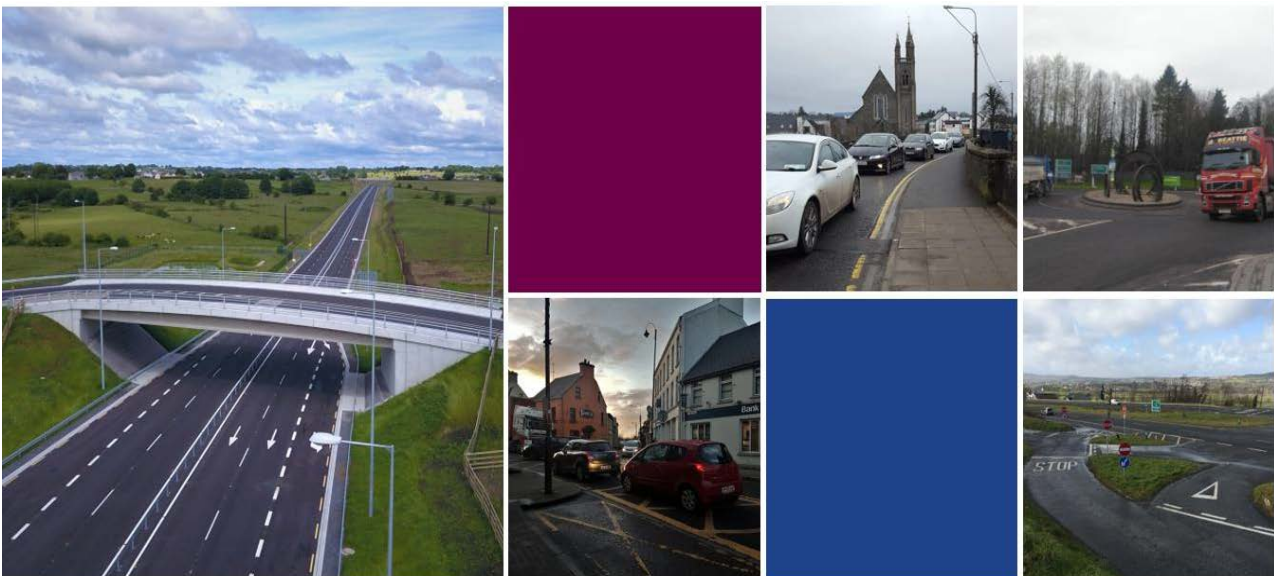


Appendix C8.01

Human Health Equity and Equality Assessment

Appendix C8.01 Human Health Equity and Equality Assessment

TEN-T Priority Route Improvement Project, Donegal



March 2026

A.1 Assessment of Effects on Health Equity

This Appendix supplements ES Chapter 8: Human Health. It identifies the potential for health inequality and health equity changes due to the positive and negative impacts of the Proposed Development. The analysis focuses on air quality and noise impacts as the most relevant health determinants to indicate changes or redistributions of exposures. The main health assessment in ES Chapter 8 Sections 8.9.1.1 and 8.10.1.1 identify 'differential' population health effects, where differences in health impact arise due to different levels of exposure, including for relevant vulnerable groups. This Appendix focuses on identifying 'disproportionate' population health effects that may arise for vulnerable groups, as indicated due to the underlying distribution of deprivation in the areas affected by the proposed development.

Scope of the assessment

The impacts on health determinants considered in this assessment are:

- Air quality, based on property counts of existing sensitive receptors within 0-100m of the new road and for the bypass predicted air quality improvement on the existing alignment.
- Noise, based on the potential number of sensitive receptors likely to be exposed to construction noise and operational traffic noise levels above 60 dB_{Lden}, and for the bypass predicted noise reduction on the existing alignment.

The vulnerable/ disadvantaged groups considered in this assessment are:

- People living in areas of higher deprivation (classified as disadvantaged, very disadvantaged, and extremely disadvantaged - a proxy for impacts on disadvantaged groups and vulnerable groups)
- People in poor health indicated by health services in 100m of the Proposed Development (Hospitals, GP/Family Practices, and nursing homes. Table 1 identifies the sensitive receptors within the study area. Where high deprivation is identified self-reported health status from the Census statistics are also considered.

It is noted that the most sensitive receptors are residential dwellings where people are present for significant periods and thereby continuously exposed to any road traffic emissions. Sensitive receptors within the study area are shown in Table 1, Figure 2, Figure 3 and Figure 4 informed by Chapter 12: Air Quality, Chapter 14: Noise and Vibration, Geodirectory data and Pobal.

Table 1: Sensitive receptors within the study area

Section	Negative Impact			Positive Impact
	Sensitive receptors within 100m)	Noise sensitive receptors experiencing >60 dB _{Lden} change	Air Quality and Noise (Communities near the existing road)	Air Quality and Noise (Communities near the existing road)
1	<ul style="list-style-type: none"> 187 residential buildings St Joseph's hospital (200m) 	15 residential receptors (2 are residential and commercial)	Meencarrigagh Cappry Drumboe Lower Magherpaste Agasheil Drumboe Upper Backlees Teevickmoy Meenavoy Lower Dunwiley Castlebane Mullandrait	Goland Cappry (from Cappry Lane towards the R252) Ballybofey Stranorlar Meenavoy Lower
2	<ul style="list-style-type: none"> 245 residential buildings Archview Lodge Nursing Home St Patricks National School Indian Community Centre Letterkenny Christian Fellowship 	16 residential receptors and 1 healthcare facility	Bunnagee Drumnaoagh Lurgybrack Listellian Drumany Dromore Trimragh Rossbracken	Listellian Bunagee (part of the community to the west) Drumany (part of the community to the west) Letterkenny Rossbrackan
3	<ul style="list-style-type: none"> 106 residential buildings 	11 residential receptors	Carrickdawson Dromore Drumfard Tullyrap Broadlea Feddyglass Pluck Raymoghy Labbadish Drumoghill Drumcarn Carrickmark Woodill Doorable Mondooy Drumbeg Slievebuck Murlough Drumboy Coneyburrow Sheercloon Cavanacor Curraghalane Ballindrait (including nearby satellite communities e.g Gortin North, Tyleford, Tamnawood, Moneen, Guystown)	Dromore, Drumbeg, Drumdaf Feddyglass Mulnagang Lifford Lifford Common Townparks

Impact Distribution

The locations of impacted receptors have been overlaid onto Pobal Deprivation Index data in GIS to show the distribution of impacts across population with different levels of social deprivation. These are shown in Figure 2 (Section 1), Figure 3 (Section 2) and Figure 4 (Section 3). Data has been extracted from GIS to show the distribution of impacts on health determinants across communities, as shown in Table 2 (Section 1), Table 5 (Section 2) and Table 6 (Section 3).

For this equity assessment, as with the main analysis in Chapter 8, communities have been identified with reference to place names of the GeoHive map viewer (See Chapter 8, section 8.2.2). It is noted that the community names vary with the magnification level, including their spelling and the inclusion of satellite communities. A proportionate approach has been taken in identifying representative communities. The use of the communities is therefore not exhaustive and is used to give geographic reference to areas of effect discussed. Other communities not listed that are in the vicinity of the community named, as well as isolated dwellings, are relevant and have been taken into account.

The following Pobal Deprivation Index categories are present in the study area:

- Marginally below average
- Disadvantaged
- Very disadvantaged
- Extremely disadvantaged

Deprivation data is shown at the Electoral Division (ED) level, however, Small Areas (the technical term for the geographic designation) with higher deprivation than their respective EDs have also been highlighted in Sections 1 and 3. Deprivation levels in Section 2 are uniform across its study area. The Small Areas with higher deprivation are:

Section 1

- Small Area 057137016
- Small Area 057137018

Section 3

- Small Area 057037006
- Small Area 057038005
- Small Area 057038006
- Small Area 057038007
- Small Area 057038001

Deprivation is driven by indicators including educational attainment, unemployment rates, occupational status, persons per room, and proportion of lone parents in a given Small Area or ED (see Figure 1 below).

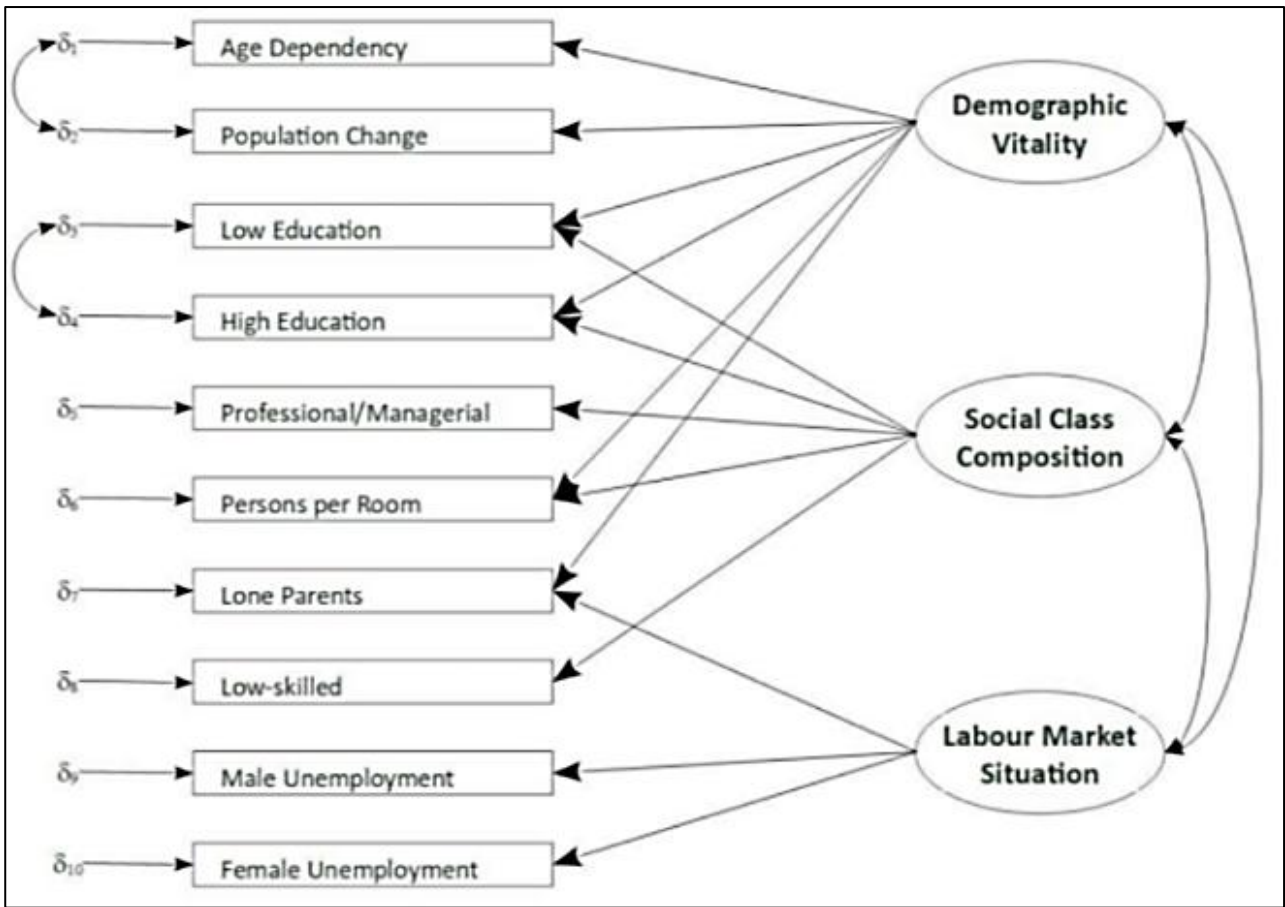


Figure 1: Deprivation indicators in Ireland (Pobal, 2022b)

Table 2: Impact distribution across Section 1

Negative Impact	Positive Impact
<ul style="list-style-type: none"> • Meencarrigagh • Cappry • Drumboe Lower • Magherpaste • Agasheil • Drumboe Upper • Backlees • Teevickmoy • Meenavoy Lower • Dunwiley • Castlebane 	<ul style="list-style-type: none"> • Tircallan • Treenamulin • Stranorlar • Ballbofey • Goland • Meenavoy Lower • Cappry
Mullandrait (including Small Area 057137016)	Stranorlar (including Small Area 057137018)
Legend	
	Marginally below average
	Disadvantaged

For Section 1 the overall trend is of most areas being 'marginally below average' in their deprivation. The equity issue is therefore in relation to areas that have greater levels of disadvantaged, i.e. that are 'disadvantaged', 'very disadvantaged' or 'extremely disadvantaged'. Table 3 and Table 4 provide additional data on the 'disadvantaged' areas. There are no 'very disadvantaged' or 'extremely disadvantaged' areas.

Table 3: Breakdown of deprivation indicators in Section 1

Area	Age dependency	Lone parent ratio	Low education	High education	Higher Level Profession	Lower class Prof	Unemployment rate male	Unemployment rate female	Home Owner	Private Rent	Local Authority Rent	Persons per room
Dooish ED (%)	35.8	17.8	14.3	36.1	39.5	16.2	7.5	7.5	78.6	11.8	3.7	0.4
Goland ED %	32.6	12.9	14.5	32.6	34.3	19.0	4.9	6.6	96.7	3.3	0	0.4
Stranorlar ED %	39.3	27.4	16.4	32.5	31.0	21.6	15.8	11.8	61.5	18.4	17.1	0.5
Small Area 057137016 (%)	52.5	39.6	23.3	24.7	n/a	n/a	26.8	25.0	n/a	n/a	n/a	n/a
Small Area 057137018 (%)	47.6	61.9	37.3	12.4	n/a	n/a	15.2	25.6	n/a	n/a	n/a	n/a
Donegal County %	38.1	19.3	17.1	33.7	n/a	n/a	11.8	9.3	n/a	n/a	n/a	n/a

For Small Area 057137016 (classed as 'disadvantaged'), compared to Donegal County, the relatively high deprivation is driven by a higher age dependency ratio, a higher proportion of lone parent households, and lower levels of third-level educational attainment. The unemployment rate in this Small Area is also higher than the average for Donegal County. This is an area near the community of Mullandrait that experiences a negative impact.

For Small Area 057137018 (classed as 'disadvantaged'), compared to Donegal County, the relatively high deprivation is similarly driven by a higher age dependency ratio, a higher proportion of lone parent households, lower levels of third-level educational attainment and higher unemployment rates. This is an area near the community of Stranorlar that experiences a positive impact.

In the context of the proposed development and the affected communities, deprivation due to high age dependency ratio may increase vulnerability, as people who are dependent due to young or old age are likely to be more sensitive to environmental and social change (as shown in Section 8.8). Age dependency is a ratio calculated by comparing the proportion of people both under 15 and over 64 years with the working age population, which is defined here as those between 15 and 64 years of age. Deprivation due to unemployment may increase vulnerability due to reduced economic resilience and fewer resources to respond to change, as well as more time spent in dwellings.

The deprivation index does not show poor health per se, but the pressures on populations that may contribute to poor health or indicate additional health or social care support needs. To provide additional context on these Small Areas that have elevated deprivation, Table 4 summarises 2022 Census statistics on self-reported health status.

For Small Area 057137016 the proportion of people who report being in bad or very bad health is 2.5%, which is similar to the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that although deprivation is higher, poor health outcomes remain relatively similar to the county and national averages. This is an area near the community of Mullandrait that experiences a negative impact.

For Small Area 057137018 the proportion of people who report being in bad or very bad health is 4.0%, which is higher than the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that high deprivation also correlates with poorer health outcomes in this location. Small Area 057137018 is therefore likely to be more sensitive to effects in relation to health equity. This is an area near the community of Stranorlar that experiences a positive impact.

Table 4: General health status in the most deprived Small Areas of Section 1

General Health	Small Area 057137016	Small Area 057137018	Donegal County	Ireland
Very good health (%)	46.6	36.2	51.7	53.2
Good health (%)	27.3	37.8	31.0	29.7
Fair health (%)	18.0	20.3	10.6	8.6
Bad health (%)	1.9	2.8	1.6	1.4
Very bad health (%)	0.6	1.2	0.4	0.3
Not Stated (%)	5.6	1.7	4.6	6.7

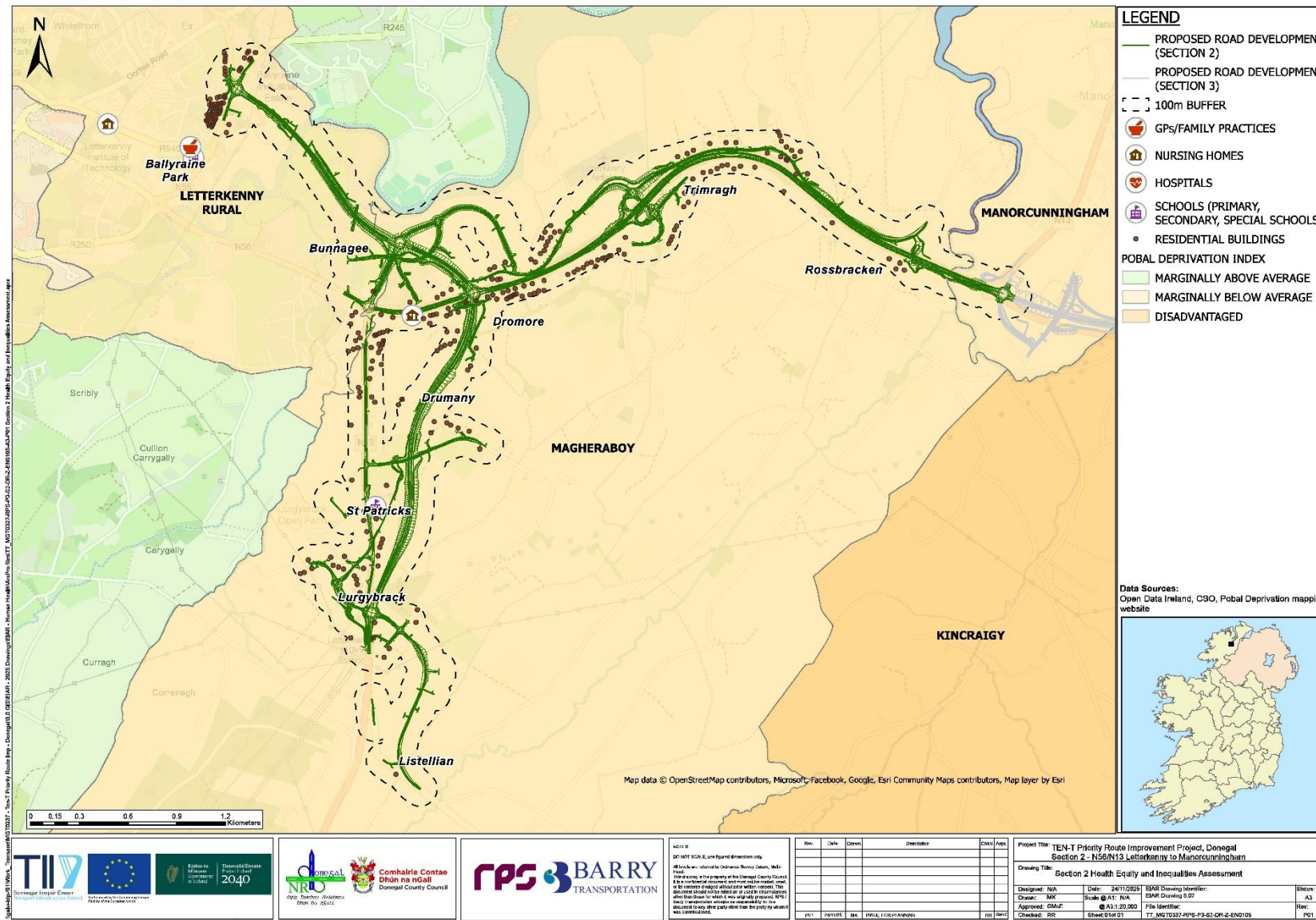


Figure 3: Sensitive receptors within Section 2

Table 5: Impact Distribution across section 2

Negative Impact	Positive Impact
Bunnagee Drumnahoagh Lurgybrack Listellian Drumany Dromore Trimragh Rossbracken	Bunnagee Letterkenny Ballyraine
Legend	
	Marginally below average

For Section 2 all areas are ‘marginally below average’ in their deprivation. There are therefore no equity issue in relation to areas with greater levels of disadvantaged. No additional data is therefore set out.

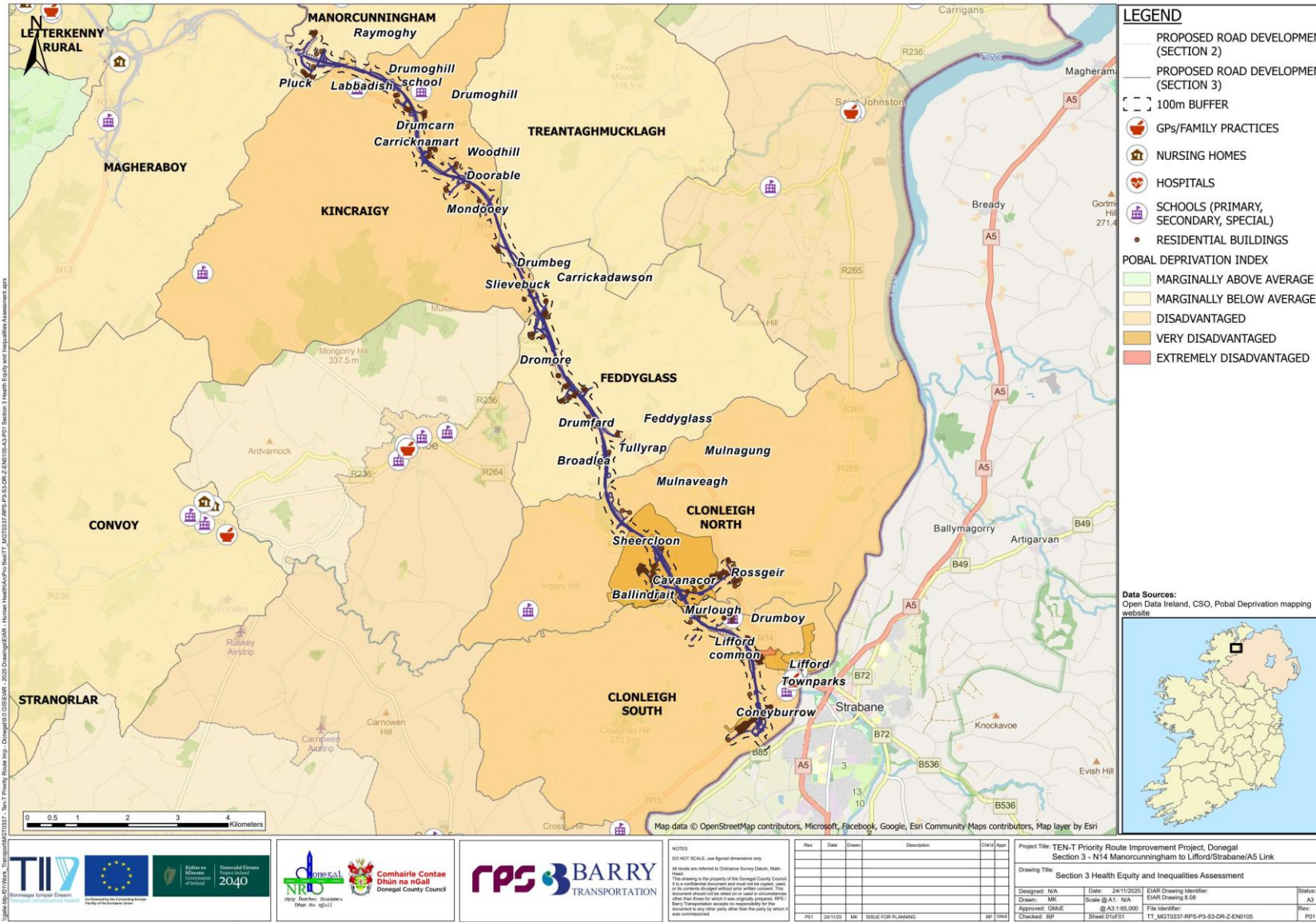


Figure 4: Sensitive receptors within Section 3

Table 6: Impact distribution across section 3

Negative Impact	Positive Impact
<ul style="list-style-type: none"> • Carrickdawson • Dromore • Drumfard • Tullyrap • Broadlea • Feddyglass 	NA
<ul style="list-style-type: none"> • Pluck • Raymoghy • Labbadish • Drumoghill • Drumcarn • Carrickmark • Woodill • Doorable • Mondooyey • Drumbeg • Slievebuck • Murlough • Drumboy • Coneyburrow • Sheerclon 	<ul style="list-style-type: none"> • Mulnagung • Mulnaveagh • Rossgeir • Drumboy
<ul style="list-style-type: none"> • Curraghalane (including Small Area 057038001) 	<ul style="list-style-type: none"> • Lifford Common (including Small Area 057038005) • Lifford (including Small Areas 057038006 and 057038007) • Townparks (including Small Area 057038007)
<ul style="list-style-type: none"> • Cavanacor • Ballindrait (including nearby satellite communities e.g Gortin North, Tyleford, Tamnawood, Moneen, Guystown) (These are all in Small Area 057037006)	NA
Legend	
	Marginally below average
	Disadvantaged
	Very disadvantaged
	Extremely disadvantaged

For Section 3 the overall trend is of most areas being ‘disadvantaged’. The equity issue is therefore in relation to areas that have greater levels of disadvantaged, i.e. are ‘very disadvantaged’ or ‘extremely disadvantaged’. Table 7 and Table 8 provide additional data on these ‘very disadvantaged’ or ‘extremely disadvantaged’ areas.

Table 7: Breakdown of deprivation indicators in Section 3

ED/Small Area	Age dependency	Lone parent ratio	Low education	High education	Higher Level Profession	Lower class Prof	Unemployment male	Unemployment female	Owner	Private Rent	Local Authority Rent	Persons per room
Mannorcunningham%	36.9	22.2	16.8	34.2	34.3	20.1	13.2	13.3	66.4	13.3	17.7	0.5
Kincraigy %	38.1	11.3	23.6	25.0	31.1	17.8	10.8	6.3	90.3	3.5	1.9	0.5
Treantaghmucklagh %	42.8	7.1	21.6	28.6	38.7	14.4	11.3	6.4	90.2	3.9	3.1	0.5
Feddyglass %	36.2	14.8	19.1	33.9	37.5	15.1	10.3	6.9	88.9	6.8	0.6	0.4
Clonleigh North %	37.4	20.6	25.1	18.8	24.6	25.7	13.7	13.6	84.0	7.3	7.3	0.4
Clonleigh South %	37.5	38.9	24.4	22.2	23.8	26.2	22.4	16.9	63.7	15.4	15.3	0.5
Small Area 057037006 %	33.3	38.5	34.9	8.1	n/a	n/a	21.3	20.6	n/a	n/a	n/a	n/a
Small Area 057038005 %	40.1	64.3	35.6	9.9	n/a	n/a	38.6	31.6	n/a	n/a	n/a	n/a
Small Area 057038006 %	38.2	55.6	33.8	19.6	n/a	n/a	28.6	12.8	n/a	n/a	n/a	n/a
Small Area 057038007 %	32.8	21.4	33.6	16.1	n/a	n/a	31.7	19.5	n/a	n/a	n/a	n/a
Small Area 057038001 %	38.3	60.9	25.0	17.3	n/a	n/a	34.4	18.9	n/a	n/a	n/a	n/a
Donegal County %	38.1	19.3	17.1	33.7	n/a	n/a	11.8	9.3	n/a	n/a	n/a	n/a

For Small Area 057037006 (classified as 'extremely disadvantaged'), the high deprivation relative to Donegal County is driven by a higher proportion of lone parent households, lower levels of third-level educational attainment and higher unemployment rates. This is an area near the communities of Ballindrait and Cavanacor (including nearby satellite communities and isolated dwellings), that experiences a negative impact.

For Small Area 057038005 (classified as 'extremely disadvantaged'), compared to Donegal County, the high deprivation is driven by a higher age dependency ratio, a higher proportion of lone parent households, lower levels of third-level educational attainment and higher unemployment rates. This is an area near the community of Lifford Common that experiences a positive impact.

For Small Area 057038006 (classified as very disadvantaged), compared to Donegal County, the high deprivation is driven by a higher proportion of lone parent households, low levels of third-level educational attainment and higher unemployment rates. This is an area near Lifford that experiences a positive impact.

For Small Area 057038007 (classified as 'very disadvantaged'), the high deprivation relative to Donegal County is driven by a higher proportion of lone parent households, lower levels of third-level educational attainment and higher unemployment rates. This is an area near Lifford and Townparks, that experiences a positive impact.

For Small Area 057038001 (classified as 'very disadvantaged'), compared to Donegal County, the high deprivation is driven by a higher proportion of lone parent households, low levels of third-level educational attainment and higher unemployment rates. This is an area near Curraghalane that experiences a negative impact.

In the context of the proposed development and the affected communities, deprivation due to high age dependency ratio may increase vulnerability, as people who are dependent due to young or old age are likely to be more sensitive to environmental and social change (as shown in Section 8.8). Age dependency is

a ratio calculated by comparing the proportion of people both under 15 and over 64 years with the working age population, which is defined here as those between 15 and 64 years of age. Deprivation due to unemployment may increase vulnerability due to reduced economic resilience and fewer resources to respond to change.

The deprivation index does not show poor health per se, but the pressures on populations that may contribute to poor health or identifying additional health needs. To provide additional context on these Small Areas that have elevated deprivation, Table 8 summarises 2022 Census statistics on self-reported health status.

Table 8: General health status in the most deprived Small Areas of Section 3

General Health	Small Area 057037006	Small Area 057038005	Small Area 057038006	Small Area 057038007	Small Area 057038001	Donegal County	Ireland
Very good health (%)	36.3	44.3	44.3	40.7	52.3	51.7	53.2
Good health (%)	37.6	33.0	31.6	31.2	31.3	31.0	29.7
Fair health	11.1	12.7	15.6	16.4	10.8	10.6	8.6
Bad health (%)	2.1	4.7	0.9	4.8	2.3	1.6	1.4
Very bad health (%)	0.4	0.0	1.4	0.0	0.6	0.4	0.3
Not Stated (%)	12.4	5.2	6.1	6.9	2.8	4.6	6.7

For Small Area 057037006 (classified as 'extremely disadvantaged') the proportion of people who report being in bad or very bad health is 2.5%, which is similar to the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that although deprivation is higher, poor health outcomes remain relatively similar to the county and national averages. This is an area near the communities of Ballindrait and Cavanacor (including nearby satellite communities and isolated dwellings), that experiences a negative impact. It is noted that this area had a high rate of non-respondents than comparator areas.

For Small Area 057038005 (classified as 'very disadvantaged') the proportion of people who report being in bad or very bad health is 4.7%, which is higher than the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that high deprivation also correlates with poorer health outcomes in this location. Small Area 057038005 is therefore likely to be more sensitive to effects in relation to health equity. This is an area near the community of Lifford Common that experiences a positive impact.

For Small Area 057038006 (classified as 'very disadvantaged') the proportion of people who report being in bad or very bad health is 2.3%, which is similar to the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that although deprivation is higher, poor health outcomes remain relatively similar to the county and national averages. This is an area near Lifford that experiences a positive impact.

For Small Area 057038007 (classified as 'very disadvantaged') the proportion of people who report being in bad or very bad health is 4.8%, which is higher than the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that high deprivation also correlates with poorer health outcomes in this location. Small Area 057038007 is therefore likely to be more sensitive to effects in relation to health equity. This is an area near Lifford and Townparks, that experiences a positive impact.

For Small Area 057038001 (classified as 'very disadvantaged') the proportion of people who report being in bad or very bad health is 2.9%, which is higher than the Donegal County average of 2.0% and higher than the national average of 1.7%. This suggests that high deprivation also correlates with poorer health outcomes in this location. Small Area 057038001 is therefore likely to be more sensitive to effects in relation to health equity. This is an area near Curraghalane that experiences a negative impact.

Assessment of Effects on Health Inequities and Inequalities

Air Quality and Noise

Section 1

Equality considerations

Construction:

- Adverse effects (an increase in exposures) arise for the communities of Meencarrigagh, Cappry, Drumboe Lower, Magherapaste, Agasheil, Drumboe Upper, Backlees, Teevickmoy, Meenavoy Lower, Dunwiley, Castlebane, Mullandrait. Across these communities, there are 187 residential properties located within 100 metres of the proposed development, 3 residential properties located within 100 metres of the Section 1 construction compound and St Joseph's Hospital located within 200 metres of the construction compound.

Operation:

- Beneficial effects (a reduction in exposures) arise for the communities of Tircallan, Treenamulin, Stranorlar, Ballbofey, Goland, Meenavoy Lower, and Cappry.
- Adverse effects (an increase in exposures) arise for the communities of Meencarrigagh, Cappry, Drumboe Lower, Magherapaste, Agasheil, Drumboe Upper, Backlees, Teevickmoy, Meenavoy Lower, Dunwiley, Castlebane, and Mullandrait. Across these communities, there are 187 residential properties located within 100 metres of the proposed development. Pre-mitigation, Chapter 14: Noise and Vibration identifies 11 properties exceeding the design goal of 60dB_{L_{den}} and requiring mitigation. With mitigation, Chapter 14: Noise and Vibration identifies some receptors where there will be significant residual adverse effects (shown in Table 14-65)

Equity considerations

Construction:

- Deprivation levels in the communities that experience adverse effects are classified as: 'marginally below average' in Meencarrigagh, Cappry, Drumboe Lower, Magherapaste, Agasheil, Drumboe Upper, Backlees, Teevickmoy, Meenavoy Lower, Dunwiley and Castlebane; and as 'disadvantaged' in Mullandrait.

Operation:

- Deprivation levels in the communities that experience beneficial effects are classified as 'marginally below average' for most benefitting communities. 1 Small Area in Stranorlar is classified as 'disadvantaged'
- Deprivation levels in the communities that experience adverse effects are 'marginally below average' in Meencarrigagh, Cappry, Drumboe Lower, Magherapaste, Agasheil, Drumboe Upper, Backlees, Teevickmoy, Meenavoy Lower, Dunwiley, and Castlebane. A very small proportion (1 properties) are located in Mullandrait classified as 'disadvantaged'.

Conclusion

Construction:

During construction there is no redistribution of exposures. Construction of the proposed development would result in noise, and dust and vehicle emissions from construction compounds and activities. The anticipated impacts indicate that areas with higher existing deprivation would experience only low levels of adverse impacts. This is because Chapter 12: Air Quality and Chapter 14: Noise and Vibration identifies no significant residual construction-related air quality and noise impacts on these sensitive receptors. Consequently, there is not likely to be widening of health inequalities nor a reduction in health equity.

Operation:

With regard to the redistribution of beneficial and adverse exposures due to the proposed development, deprivation levels are broadly uniform across the Section 1 study area, with the exception of the very small

populations in Mullandrait and Stranorlar where deprivation is slightly more elevated than the remainder of the area.

Mullandrait is predicted to have increased exposures (negative impact), and Stranorlar is predicted to have reduced exposures (positive impact). The other communities predicted to have increased exposures do not appear to be more deprived than those expected to benefit from reduced exposures.

It is noted that the area of Mullandrait classified as disadvantaged (Small Area 057137016) that would experience a negative impact, reports levels of bad or very bad health status that are similar to the Donegal County average (so not especially sensitive to change). By contrast the disadvantaged area of Stranorlar experiencing positive impacts (Small Area 057137018) report levels of bad or very bad health status that are notably higher than the Donegal County average (so more sensitive to change).

These findings reinforce the limited potential to widen health inequity. The findings indicate poorer baseline health outcomes in areas that would experience positive impacts (suggesting greater potential for gains in public health), than in areas that would experience negative impacts (suggesting lower potential for reductions in public health).

Given the limited levels of deprivation and the relatively balanced picture, taking a reasonable worst-case the conclusion is that there is not likely to be widening of health inequalities nor a reduction or improvement in health equity within Section 1.

As such, it can be concluded that the proposed development would result in a more equal distribution of air quality and noise effects across areas of similar social disadvantages, without changing health equity.

Section 2

Equality considerations

Construction:

- Adverse effects (an increase in exposures) arise for the communities of Bunnagee, Drumnahoagh, Lurgybrack, Listellian, Drumany, Dromore, Trimragh and Rossbracken. Across these communities, there are 245 residential properties within 100 metres of Section 2 including Archview Lodge Nursing Home, St. Patrick's National School (Drumkeen) and the Indian Community Centre in Letterkenny. The national school, includes a building used for special needs education.

Operation:

- Beneficial effects (a reduction in exposures) arise for the communities of Bunnagee, Letterkenny, and Ballyraine.
- Adverse effects (an increase in exposures) arise for the communities Bunnagee, Drumnahoagh, Lurgybrack, Listellian, Drumany, Dromore, Trimragh and Rossbracken. Across these communities, there are 245 residential properties within 100 metres of Section 2 including Archview Lodge Nursing Home, St. Patrick's National School (Drumkeen) and the Indian Community Centre in Letterkenny. The national school includes a building used for special needs education. Pre-mitigation, Chapter 14: Noise and Vibration identifies 17 properties exceeding the design goal of 60dB_{Lden} and requiring mitigation. Chapter 14: Noise and Vibration identifies no receptors in Section 2 where there will be significant residual adverse effects (shown in Table 14-61).

Equity considerations

Construction:

- Deprivation levels in the communities that experience adverse effects are classified as 'marginally below average'.

Operation:

- Deprivation levels in the communities that experience beneficial effects are classified as 'marginally below average'.

- Deprivation levels in the communities that experience adverse effects are classified as ‘marginally below average’.

Conclusion

Construction:

During construction there is no redistribution of exposures. Construction of the proposed development would result in noise, and dust and vehicle emissions from construction compounds and activities. The anticipated impacts indicate that areas with similar levels of deprivation would experience only low levels of adverse impacts. This is because Chapter 12: Air Quality and Chapter 14: Noise and Vibration identifies no significant residual construction-related air quality and noise impacts on these sensitive receptors. Consequently, there is not likely to be widening of health inequalities nor a reduction in health equity.

Operation:

With regard to the redistribution of beneficial and adverse exposures due to the proposed development, deprivation levels are broadly uniform across the Section 2 study area. Areas predicted to have increased exposures do not appear to be more deprived than those expected to benefit from reduced exposures. Consequently, there is no likely widening of health inequalities nor a reduction or improvement in health equity. As such, it can be concluded that the proposed development would result in a more equal distribution of air quality and noise effects across areas of similar social disadvantages, without changing health equity.

Section 3

Equality considerations

Construction:

- Adverse effects (an increase in exposures) arise for the communities of Carrickdawson, Dromore, Drumfard, Tullyrap, Broadlea, Feddyglass, Pluck, Raymoghly, Labbadish, Drumoghil, Drumcarn, Carrickmark, Woodhill, Doorable, Mondooy, Drumbeg, Sleivebuck, Murlough, Drumboy, Coneyburrow, Sheerclon, Cavanacor, and Ballindrait. Across these communities, there are 106 residential properties located within 100 metres, Drumoghil National School, Ray National School, and St Patricks National School (Murlough) within 200 metres. 3 properties are within 100 metres of the Pluck compound, and 4 properties within 100 metres of the Drumoghil compound.

Operation:

- Beneficial effects (a reduction in exposures) arise for the communities of Mulnagung, Mulnaveagh, Rossgeir, Drumboy, Lifford, Lifford Common and Townparks.
- Adverse effects (an increase in exposures) arise for the communities of Carrickdawson, Dromore, Drumfard, Tullyrap, Broadlea, Feddyglass, Pluck, Raymoghly, Labbadish, Drumoghil, Drumcarn, Carrickmark, Woodhill, Doorable, Mondooy, Drumbeg, Sleivebuck, Murlough, Drumboy, Coneyburrow, Sheerclon, Cavanacor, and Ballindrait. Across these communities, there are 106 residential properties located within 100 metres, Drumoghil National School, Ray National School, and St Patricks National School (Murlough) within 200 metres. Pre-mitigation, Chapter 14: Noise and Vibration identifies 11 properties exceeding the design goal of 60dB_{Lden} and requiring mitigation.

Equity considerations

Construction:

- Deprivation levels in the communities that experience adverse effects are classified as ‘marginally below average’ in Carrickdawson, Dromore, Drumfard, Tullyrap, Broadlea, and Feddyglass; ‘disadvantaged’ in Pluck, Raymoghly, Labbadish, Drumoghil, Drumcarn, Carrickmark, Woodhill, Doorable, Mondooy, Drumbeg, Sleivebuck, Murlough, Drumboy, Sheerclon and Coneyburrow; and ‘extremely disadvantaged’ in Cavanacor, and Ballindrait (including nearby satellite communities and isolated dwellings).

Operation:

- Deprivation levels in the communities that experience beneficial effects are classified as 'marginally below average and disadvantaged'.
- Deprivation levels in the communities that experience adverse effects are classified as 'marginally below average' in Carrickdawson, Dromore, Drumfard, Tullyrap, Broadlea, and Feddyglass; 'disadvantaged' in Pluck, Raymoghly, Labbadish, Drumoghil, Drumcarn, Carrickmark, Woodhill, Doorable, Mondooy, Drumbeg, Sleivebuck, Murlough, Drumboy, Coneyburrow, and Sheerclon; and 'extremely disadvantaged' in Cavanacor and Ballindrait (including nearby satellite communities and isolated dwellings).

Conclusion**Construction:**

During construction there is no redistribution of exposures. Construction of the proposed development would result in noise, and dust and vehicle emissions from construction compounds and activities. The anticipated impacts indicate that areas with higher existing deprivation would experience only low levels of adverse impacts. This is because Chapter 12: Air Quality and Chapter 14: Noise and Vibration identify no significant residual construction-related air quality and noise impacts on these sensitive receptors. Consequently, there is not likely to be widening of health inequalities nor a reduction in health equity.

Operation:

The redistribution of beneficial and adverse exposures due to the proposed development broadly means that areas of existing higher deprivation experience both positive and negative impacts. Areas predicted to have increased exposures (negative impacts) appear to be more deprived than those expected to benefit from reduced exposures (positive impacts).

However, Chapter 12: Air Quality identifies no significant residual operational air quality impacts on these sensitive receptors and Chapter 14: Noise and Vibration identifies only some individual receptor where significant residual impacts would remain following mitigation. Noise mitigation such as noise barriers is identified in Chapter 14: Noise and Vibration for receptors with noise levels above 60dB_{L_{den}}. These findings indicate limited potential for widespread population health change, although the health assessment also has regard to non-threshold effects, so a degree of minor adverse change in population health outcomes is factored into this assessment.

It is noted that the only area classified as extremely disadvantaged (Small Area 057037006) would experience a negative impact, however this area reports levels of bad or very bad health status that are similar to the Donegal County average (so not especially sensitive to change). Also relevant is that two of the three areas experiencing positive impacts that are classified as very disadvantaged, report levels of bad or very bad health status that are notably higher than the Donegal County average (so more sensitive to change).

These findings suggest that the Proposed Development's health equity effects are likely to be limited, with the trend of greater deprivation in areas experiencing negative impacts moderated by the health status findings. Findings which show a more nuanced picture of poorer baseline health outcomes in areas that would experience positive impacts (suggesting greater potential for gains in public health), than in areas that would experience negative impacts (suggesting lower potential for reductions in public health).

Changes in health inequalities and health equity are therefore likely to be marginal, with limited potential to adversely affect population health. Taking a reasonable worst-case the conclusion is a slight widening of health inequalities and a slight reduction in health equity within Section 3.