

# Cabinet Supplementary Agenda



**12. The Future of the Experimental Healthy Neighbourhoods  
(Pages 3 - 20)**

***This supplementary agenda is a replacement for Appendix 1i, to now include previously omitted information with regards to the analysis of the statutory objections for Holmesdale CHN (Page 7 to 10).***

***The additional information provides the Council's response to the 4 key objection themes exactly the same as the other themes for the other CHNs.***

***Please note; this omission does not invalidate the report recommendations as the content of the objections were included in the original technical analysis during the drafting of the report.***

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## Appendix 1i.

### Analysis of responses received from Statutory Consultation

Analysis of Objections received from both emails and statutory consultation through Getinvolved survey portal								
Ref	Responses received	CHN						Total number across all CHN
		Albert Rd	Dalmally Rd	Elmers Rd	Kemerton Rd	Sutherland Rd	Parsons Mead	
	Responses from specific CHN email	103	114	57	10	69	102	455
	Responses from statutory process Getinvolved portal	72	12	19	27	24	18	172
<b>1</b>	<b>Total responses received</b>	<b>175</b>	<b>126</b>	<b>76</b>	<b>37</b>	<b>93</b>	<b>120</b>	<b>627</b>
	Number of responses related to permit enquiries and other queries	86	106	56	23	60	95	426
	Relevant responses specific to measures in CHN from both emails and getinvolved from total responses	89	20	20	14	33	25	201
	Number of support	2	11	1	0	0	0	14
<b>2</b>	<b>Number of objections related to the schemes from getinvolved and emails</b>	<b>87</b>	<b>9</b>	<b>19</b>	<b>14</b>	<b>33</b>	<b>25</b>	<b>187</b>
	Number of objections from within CHN via Getinvolved portal identified through postcodes	44	1	4	1	4	1	55
	Number of objections from outside of CHN via Getinvolved portal identified through postcodes	25	6	13	6	19	12	81
	Number of Objections via email related to specific measures (postcodes not provided)	18	2	2	7	10	12	51
<b>3</b> <i>(check)</i>	<b>Total number of objections received via getinvolved and email</b>	<b>87</b>	<b>9</b>	<b>19</b>	<b>14</b>	<b>33</b>	<b>25</b>	<b>187</b>
<b>4</b>	<b>Analysis into key themes from total number of objections received( objectors gave more than one reason )</b>							
<b>a</b>	Traffic displacement and access issues such as difficulties for service deliveries , increase journey times	48%	50%	44%	52%	53%	47%	
	Number of objections for Traffic displacement and access issues	42	4	9	7	16	12	90
<b>b</b>	Impact on community and environment ( pollution, impact on mental well-being , personal safety etc)	28%	23%	12%	29%	30%	25%	
	Number of objections for impact on environment	24	3	5	4	9	7	52
<b>c</b>	Financial driver( council introduced scheme to raise revenue)	18%	27%	20%	19%	12%	21%	
	Number of objections for financial driver	16	2	3	3	6	5	34
<b>d</b>	Other ( poor communications , inadequate signage, etc)	6%	0%	24%	0%	5%	7%	
	Number of objections for " Other"	5	1	1	1	2	2	11
	<b>% Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	
	<b>Total number of objections received</b>	<b>87</b>	<b>9</b>	<b>19</b>	<b>14</b>	<b>33</b>	<b>25</b>	<b>187</b>

## Appendix 2 Technical Assessments integral to the monitoring exercise

1.1 The objections received from both the “get involved” and specific email addresses were analysed and categorised into 4 key themes, in general one objection may contain numerous reasons. The key themes identified were:

- a) **Traffic displacement and access** (including traffic displacement, increased congestion, increased vehicle journey times and reduced access to service vehicles)
- b) **Financial drivers** (including CHN is seen as a revenue-making scheme, increasing household costs or taxes and negatively impacts businesses)
- c) **Impacts on the community and environment** (including, increased pollution, impacts on safety and impacts on mental well-being,)
- d) **Other** (including Poor communication about scheme, signage is inadequate/unclear/poor, and access to permits).

1.2 **Theme 1: Traffic displacement and access issues accounts for approximately 50% of all objections received, 90 objections across all CHN**

**Traffic displacement issues:** The objections received through the getinvolved surveys are related to traffic displacements on 1) roads which exist within the healthy neighbourhood areas but not restricted, 2) roads which adjoins healthy neighbourhoods and 3) main roads as a direct result of the restrictions. Similarly, residents who attended the drop-in sessions raised concerns about the level of traffic displacement in the surrounding areas and main roads. They raised concerns about the perceived increase in pollutant concentrations along main roads which have residential frontages, schools, retail frontages and high pedestrian activities.

The outcome of the traffic monitoring exercise has demonstrated the following:

- a) **a decrease in through traffic** across all healthy neighbourhoods within the **restricted roads**.
- b) **a decrease in traffic** on some main roads and **marginal increase** in traffic on other main roads
- c) **an increase in traffic in unrestricted roads which are within** the HN areas
- d) **an increase in traffic** in residential roads **adjoining** the HN areas.

It should be noted that the comparison of traffic movements was only possible where we had previous data as baseline and in some cases no data exist pre- introduction of the schemes. The data is also a comparison of the 7-day average for two-way movements and some increases are considered to be marginal. The decrease in traffic movements has created an improved environment for residents conducive to walking and cycling. The nature of the current schemes i.e, the lack of a comprehensive set of measures within each HN have created “through “routes for drivers who can still use some residential roads. These unrestricted routes have to be addressed in order to create a consistent approach to improving the quality of the HN and ensure the safety benefits are widespread. Similarly, a few residential roads which adjoins the current HN are now subjected to “through “traffic movements. They all have to be treated to ensure a consistent approach to traffic reduction and improved environment. This can be an integral part of additional community engagement where the technical evidence can play a key part in a co-design process working collaboratively with those residents mostly affected and with those least affected.

**Boundary roads:** On boundary roads the technical assessments have indicated a mixed set of data, some main roads have experienced a decrease in through traffic movements whilst others have seen a small increase. Any increases in traffic movements are considered low as far as traffic movements on main roads are concerned. For example, the highest increase in

traffic movements on a main road in accordance with the data is along Morland Rd or approx. 3000 vehicles over a 7 day 24-hour period. This equates to 18 vehicles per hour on average. These counts were taken at a point in time during the year and in general traffic on main roads fluctuates throughout the year. Traffic movements are dependent upon various factors which can impact on the operation of the main road network. Behavioural change can play a significant role in how the road network is used by car drivers and how traffic flow can fluctuate throughout the year. More importantly, we have not received any concerns from Transport for London Buses with regard to delays on the main road network as a result of the HN measures in place, nor have we received any concerns from the emergency services about any specific part of the main road network in close proximity of any HN.

**Traffic speed:** The monitoring exercise has indicated a reduction in the 85% percentile speed within the healthy neighbourhoods where we had previous data to use as a comparison, (this is the speed at which 85% of drivers considers this as a safe speed to travel under free flow condition). The range of speed reduction is between 1.6 to 5 mph achieving a speed either under or close to the 20pmh speed limit. In general, it has been identified through research that a reduction of 1 mph can reduce road injury collision by 5-6%, more importantly the severity of injury collisions is less as speed is reduced to near or below 20 mph. Local highway authorities have a duty of care to improve road safety on the public highway. Section 39 of the Road Traffic Act 1988 imposes a statutory obligation on every Highway Authority to promote and improve road safety.

**Road injury collisions (all severities) within HN:** the monitoring exercise has made an assessment of road collisions in relation to the experimental scheme in place. The collision study was carried over a 28 month (not 36 months as normal practice dictates) before and 28 months after given the availability of data post implementation of the scheme. In summary, the study indicates a **collision reduction** in Albert Rd HN, Holmesdale Rd HN and in Parsons Mead. No change in Elmers Rd HN

Conversely, the study indicates an **increase in** Dalmally Rd HN and similarly an increase in Sutherland Rd HN. The next stage is to analyse in detail these collisions and identify measures which could reduce the risks of future occurrence. There is no change in Parsons Mead HN. As stated previously road collisions are multifactor events and attributable to poor drivers behaviour.

**Road injury collisions (all severities) boundary roads:** In contrast, there has been an **increase** in road injury collisions on boundary roads. In general, main roads have higher collision rates due to the high volume of traffic they carry and high level of exposure. In general, road collisions are multifactor events and is defined as "An accident is a rare, random, multifactor event always preceded by a situation in which one or more road users have failed to cope with the road environment" (Ref: Royal Society for the Prevention of Accidents "RoSPA" in brief). The high volume and traffic mix on main roads increase the exposure of road users; additionally poor driver behaviour can add to the increased risk of collision occurrence. In accordance with RoSPA 95% of all road injury collisions are attributable to poor drivers' behaviour. The council has a programme for reducing the severity of road collision integral to the Vision Zero programme funded by Transport for London.

**Access issues:** The Council has published information online which includes how the permit system works and eligibility for access. The information is very comprehensive and should assist residents in meeting some of their essential needs. The web site is very clear about the eligibility for permits and allows up to three permits per household. Residents can contact the council in advance if they have specific needs for travel arrangements from their home addresses. Access to emergency and other statutory service vehicles are retained. The web site information can be accessed via [Exemption Permits | Croydon Council](#). The permit system includes the following

- Resident exemptions
- Temporary resident exemptions
- Carers Exemptions ( up to 12 months as a regular carer)
- Blue Badge Exemptions

- Nursery and school staff exemptions

### 1.3 **Theme 2: Impact on the environment due to increase in pollution etc 52 objections received**

**Officers view:** The monitoring exercise has indicated a decrease in the level of pollutant concentration especially NO<sub>2</sub> which is the dominant pollutants insofar as vehicular emissions are concerned. The level of pollutant concentration is well below the mean objectives for the UK. In general, the measures within the healthy neighbourhoods have contributed to an improved air quality. Some residents have commented on the benefits of perceived improved air quality as a direct result from lower volumes of traffic through their restricted streets.

### 1.4 **Theme 3: Revenue raising scheme, 34 objections received**

**Officers View:** The council is obliged to ring fence revenues from both parking enforcement and enforcement of traffic regulations for the purpose of maintaining the public highway in line with current legislation.

### 1.5 **Theme 4: "Other" such as poor signage, poor communications from the council, no opportunity to participate etc, 11 objections received**

**Officers View:** A few of the objections are related to poor communications about the entire healthy neighbourhood programme resulting in poor relationship between the council and residents. The manner in which these schemes were introduced has also raised objections given that residents felt they were no engagement and no opportunities to have they say. Additionally, a few residents felt that the current signage is confusing and can cause drivers to make u- turns just before the camera locations resulting in an increased risk to accidents. Signage for any highway schemes is designed in accordance with the Traffic Signs Regulations and General Directions 2016.

## Holmesdale CHN Statutory Consultation analysis

<b>Table 1 Holmesdale CHN</b>		
	<b>Analysis of Objections received from both emails and statutory consultation through Getinvolved survey portal from Holmesdale CHN</b>	
<b>Ref</b>	<b>Responses received</b>	<b>CHN</b>
		<b>Holmesdale</b>
	Responses from specific CHN email	163
	Responses from statutory process Getinvolved portal	79
<b>1</b>	<b>Total responses received</b>	<b>242</b>
	Number of responses related to permit enquiries and other queries	135
	Relevant responses specific to measures in CHN from both emails and getinvolved from total responses	104
	Number of support	23
<b>2</b>	<b><i>Number of objections related to the schemes from getinvolved and emails</i></b>	<b>81</b>
	Number of objections from within CHN via Getinvolved portal identified through postcodes	29
	Number of objections from outside of CHN via Getinvolved portal identified through postcodes	22
	Number of Objections via email related to specific measures ( postcodes not provided)	30
<b>3 (check)</b>	<b><i>Total number of objections received via getinvolved and email</i></b>	<b>81</b>
<b>4</b>	<b>Analysis into key themes from total number of objections received( objectors gave more than one reason )</b>	
<b>a</b>	Traffic displacement and access issues such as difficulties for service deliveries , increase journey times	47%
	Number of objections for Traffic displacement and access issues	38
<b>b</b>	Impact on community and environment ( pollution, impact on mental well-being , personal safety etc)	26%
	Number of objections for impact on environment	21
<b>c</b>	Financial driver( council introduced scheme to raise revenue)	20%
	Number of objections for financial driver	16
<b>d</b>	Other ( poor communications, inadequate signage, etc)	7%
	Number of objections for" Other"	6
	<b>% Total</b>	<b>100%</b>
	<b>Total number of objections received</b>	<b>81</b>

## Technical Assessments integral to the monitoring exercise carried out for Holmesdale CHN

- 1.1 The objections received from both the “get involved” and specific email addresses were analysed and categorised into 4 key themes, in general one objection may contain numerous reasons. The key themes identified were:
- e) **Traffic displacement and access** (including traffic displacement, increased congestion, increased vehicle journey times and reduced access to service vehicles)
  - f) **Financial drivers** (including CHN is seen as a revenue-making scheme, increasing household costs or taxes and negatively impacts businesses)
  - g) **Impacts on the community and environment** (including, increased pollution, impacts on safety and impacts on mental well-being,)
  - h) **Other** (including Poor communication about scheme, signage is inadequate/unclear/poor, and access to permits).
- 1.2 **Theme 1: Traffic displacement and access issues accounts for approximately 47% of all objections received, 38 objections across Holmesdale CHN**

**Traffic displacement issues:** The objections received through the getinvolved surveys are related to traffic displacements on 1) roads which exist within the healthy neighbourhood areas but not restricted, 2) roads which adjoins healthy neighbourhoods and 3) main roads as a direct result of the restrictions. Similarly, residents who attended the drop-in sessions raised concerns about the level of traffic displacement in the surrounding areas and main roads. They raised concerns about the perceived increase in pollutant concentrations along main roads which have residential frontages, schools, retail frontages and high pedestrian activities.

The outcome of the traffic monitoring exercise has demonstrated the following:

- e) **a decrease in through traffic** across the healthy neighbourhood within the **restricted roads**.
- f) **a decrease in traffic** on main roads where we had previous data for comparison
- g) **an increase in traffic in Dixon Rd** which is unrestricted and lies **within** the HN area

It should be noted that the comparison of traffic movements was only possible where we had previous data as baseline and in some cases no data exist pre- introduction of the schemes. The data is also a comparison of the 7-day average for two-way movements. The decrease in traffic movements has created an improved environment for residents conducive to walking and cycling. The nature of the current scheme i.e, the lack of a comprehensive set of measures within the Holmesdale HN have created “through” routes for drivers who can still use such residential road. The displaced traffic in Dixon Rd which is an unrestricted route but lies within the HN has to be addressed in order to create a consistent approach to improving the quality of the HN and ensure the safety benefits are widespread. This can be an integral part of additional community engagement where the technical evidence can play a key part in a co-design process working collaboratively with those residents mostly affected and with those least affected.

**Boundary roads:** On boundary roads the technical assessments have indicated a decrease in traffic volume albeit small, we could only assessed main roads where we had previous data to compare. Traffic movements are dependent upon various factors which can impact on the operation of the main road network. Behavioural change can play a significant role in how the road network is used by car drivers and how traffic flow can fluctuate throughout the year. More importantly, we have not received any concerns from Transport for London Buses with



regard to delays on the main road network as a result of the HN measures in place, nor have we received any concerns from the emergency services about any specific part of the main road network in close proximity of any HN.

**Traffic speed:** The monitoring exercise has indicated a reduction in the 85% percentile speed within the Holmesdale healthy neighbourhood where we had previous data to use as a comparison, (this is the speed at which 85% of drivers considers this as a safe speed to travel under free flow condition). The **speed reduction** of 5 mph from 27mph equates to an 18% reduction. In general, it has been identified through research that a reduction of 1 mph can reduce road injury collision by 5-6%, more importantly the severity of injury collisions is less as speed is reduced to near or below 20 mph. Local highway authorities have a duty of care to improve road safety on the public highway. Section 39 of the Road Traffic Act 1988 imposes a statutory obligation on every Highway Authority to promote and improve road safety.

**Road injury collisions (all severities) within HN:** the monitoring exercise has made an assessment of road collisions in relation to the experimental scheme in place. The collision study was carried over a 28 month (not 36 months as normal practice dictates) before and 28 months after given the availability of data post implementation of the scheme.

Specific to Holmesdale CHN there has been a reduction from 10 to 2 injury collision, a **reduction of 75%**.

**Road injury collisions (all severities) boundary roads:** In contrast, there has been an **increase** in road injury collisions on boundary roads. In general, main roads have higher collision rates due to the high volume of traffic they carry and high level of exposure. In general, road collisions are multifactor events and is defined as “An accident is a rare, random, multifactor event always preceded by a situation in which one or more road users have failed to cope with the road environment” (Ref: Royal Society for the Prevention of Accidents “RoSPA” in brief). The high volume and traffic mix on main roads increase the exposure of road users; additionally poor driver behaviour can add to the increased risk of collision occurrence. In accordance with RoSPA 95% of all road injury collisions are attributable to poor drivers' behaviour. The council has a programme for reducing the severity of road collision integral to the Vision Zero programme funded by Transport for London.

**Access issues:** The Council has published information online which includes how the permit system works and eligibility for access. The information is very comprehensive and should assist residents in meeting some of their essential needs. The web site is very clear about the eligibility for permits and allows up to three permits per household. Residents can contact the council in advance if they have specific needs for travel arrangements from their home addresses. Access to emergency and other statutory service vehicles are retained. The web site information can be accessed via [Exemption Permits | Croydon Council](#). The permit system includes the following

- Resident exemptions
- Temporary resident exemptions
- Carers Exemptions ( up to 12 months as a regular carer)
- Blue Badge Exemptions
- Nursery and school staff exemptions

### 1.3 **Theme 2: Impact on the environment due to increase in pollution etc 21 objections received , 21% of all objections**

**Officers view:** The monitoring exercise has indicated a decrease in the level of pollutant concentration especially NO<sub>2</sub> which is the dominant pollutants insofar as vehicular emissions are concerned. The level of pollutant concentration is well below the mean objectives for the UK. In general, the measures within the healthy neighbourhoods have contributed to an improved air quality. Some residents have commented on the benefits of perceived improved air quality as a direct result from lower volumes of traffic through their restricted streets.

#### 1.4 Theme 3: Revenue raising scheme, 16 objections received , 20% of all objections

**Officers View:** The council is obliged to ring fence revenues from both parking enforcement and enforcement of traffic regulations for the purpose of maintaining the public highway in line with current legislation.

#### 1.5 Theme 4:” Other” such as poor signage, poor communications from the council, no opportunity to participate etc, 6 objections received, 7% of all objections

**Officers View:** A few of the objections are related to poor communications about the entire healthy neighbourhood programme resulting in poor relationship between the council and residents. The manner in which these schemes were introduced has also raised objections given that residents felt they were no engagement and no opportunities to have they say. Additionally, a few residents felt that the current signage is confusing and can cause drivers to make u- turns just before the camera locations resulting in an increased risk to accidents. Signage for any highway schemes is designed in accordance with the Traffic Signs Regulations and General Directions 2016.

#### 1.6 Community Engagements: Drop-in Sessions

##### Outcome of the Drop-in sessions held during February and March 2023

CHN Areas	Wards	Venues	Dates	Times
Dalmally Rd/ Ellmers/ Kemerton	Addiscombe East and Addiscombe West	Woodside Primary School Morland Rd CR06NF	Tuesday 8th Feb Wednesday 9th Feb	5-8pm
Holmesdale Rd	South Norwood	Stanley Arts Café 12 South Norwood Hill, SW256AB	Wednesday 15th Feb Thursday 16th Feb	5-8pm
Albert Rd	Woodside	St Marks Church Albert Rd, South Norwood, SE254JE	Monday 20 <sup>th</sup> Feb Wednesday 22nd Feb	5-8pm
Parsons Mead/ Sutherland	Broad Green	Broad Green Library 89 Canterbury Rd CR03HA	Thursday 2 <sup>nd</sup> March Monday 6 <sup>th</sup> March	5-8pm

## 1.7 Summary of Findings from each CHN Drop-in session (key themes)

CHN Drop-in session	What some attendees liked about it (key comments)	What other attendees disliked about it (key comments)
Albert Rd	Some residents think that the roads within the CHN now feel quieter, less polluted and safer, making it more pleasant for people to walk and cycle	There were concerns that the CHN had displaced traffic (and pollution) onto other roads The CHN is making it more difficult for some residents to travel around the area by car Some roads now have vehicles needing to turn around as they can't get through It is making it harder to park in some areas, Some residents were confused about the permits process. Signage was also highlighted as an issue Safety concerns
Damally Rd	Reduced level of through traffic, safer and quieter streets	Money making scheme, no engagement, objectives were never made clear and communicated
Elmers Rd	Reduced level of through traffic, safer and quieter streets	Should be removed. Increased fear of crime, not addressing speeding, encourage U turns, displaced traffic
Kemerton Rd	No through traffic	Should be removed. Bollards look ugly, difficulty in turning around due to closure, increase in anti-social behaviour and crime
Holmesdale Rd	Reduced level of through traffic, safer and quieter streets	Traffic displacement on main roads and other roads within CHN, not addressed speeding, objectives never communicated by council, money making scheme, perception in fear of crime increasing poses danger to women.
Broad Green ( Surtherland Rd and Parsons Mead	Only two attendees stated they felt the area had improved	Displaced traffic onto Wentworth and Priory Roads, and on London Rd and Mitcham Rd, speeding issues and drivers frustrated at congested residential roads taking displaced traffic

## 1.8 Community Engagements: Outcome of the Scientific Resident Polling

- 49% of all those who live within HN's were aware of HN in their area
- 58% were confident about their understanding of HN and the general idea that HN aimed at traffic reduction and improve the quality of their area was broadly understood.
- 6 out of 10 people surveyed were aware of the permit system
- Support for HN amongst those surveyed was around 58-61%
- There is 37% level of satisfaction within the Albert Rd CHN, lowest level within the cohort of CHN, in comparison with Holmesdale 39%, Dalmally (include Kemerton and Elmers Rd )50 %and Parsons Mead and Sutherland 53%
- Those who were surveyed acknowledged the improvement in the quality of their neighbourhood (road safety and more active travel) whilst also acknowledging the impact on bordering streets
- 1in 3 who was polled said that less traffic is the best thing about HN
- 1in 3 who was polled said it has encouraged more active travel
- Nearly half of those polled (48% ) from boundary roads said diverting traffic on boundary roads was the main contention whilst 38% of those polled within HN said the same thing

- 7 in 10 residents in HN expressed the desire to be more involved “Local communities should be more involved in the planning and implementation of Healthy neighbourhoods”
- There is a perception that the narrative about camera enforcement was not clear, and people felt this was a finance driven scheme
- 21% of all those within the HN areas said they were “very likely” to commit to engaging with the council, whilst 45% said they were “quite likely” committed.

## Quantitative Assessments and outcome

- 1.9 **General status of roads within experimental Healthy Neighbourhoods:** At the time of their introduction a few roads which were considered “through routes” were closed to traffic by planters and later changed to restricted access measures. Not all roads within the healthy neighbourhoods have access restrictions and a few roads situated just outside of the HN boundaries were excluded. The unrestricted roads within the HN’s are used by through traffic wishing to gain access to main roads, causing displacement in these roads. Similarly, roads just outside of HN’s have suffered from traffic displacement as a result of the HN restrictions. The traffic monitoring exercise which was carried out has identified the level of displaced traffic in these roads and considerations to be given to any adjustments to ensure a coherent set of measures to maximise road safety benefits and further improvements to the quality of the urban space.
- 1.10 **Summary of traffic survey methodology:** The adopted methodology relies on the analysis of before and after-intervention data from a number of different sources, captured from survey locations across the study area. As such, analysis has been limited to locations where both before and after data is available and change can be established. For analysis, the baseline data is taken from historic surveys taken between 2017 and 2019, used to inform various schemes and commissions from LBC and TfL. The Automatic Traffic Counts largely cover internal, neighbourhood roads sites. For boundary roads, baseline data has largely been taken from DfT permanent road traffic counters. It should be noted that these counters do not record speed and there is therefore an absence in ‘before’ speed data for many boundary road sites.
- 1.11 **Cycle and Pedestrian Counts:** Numerous permanent Vivacity data sensors were introduced across the project area after the introduction of the Healthy Neighbourhoods. This data has been used to understand trends in pedal cycle and pedestrian flows since installation. Whilst there is no ‘before and after’ data, information on flows has been obtained for a 12-month period post-introduction of the HNs. The analysis was conducted to assess changes in cycle and pedestrian volumes from March 2022 to March 2023
- 1.12 **General Traffic trends:** There is evidence to suggest that the borough may have experienced a sustained modal shift following the COVID-19 pandemic. Data collected from DfT counter sites across the borough (largely on principal or major roads) shows an increase in cycles and a decrease in vehicles from 2019 to 2022. Cycle flows were 11735, equivalent to a 29% increase on 2019 counts. The table below shows the trends in mode types from 2019-22.

Mode Type	2019	2022	% increase or decrease
Cycles	9119	11735	+29%
P2W	24534	32055	+31%
Cars	1120385	1031463	-8%
Buses	27033	26128	-3%
LGV	206434	220557	+7%
HGV	35285	41253	+17%

**1.13 Journey times evaluation:** Traffic data pertaining to journey times is usually supplied by The Flow. They collect raw traffic data using telematics technology from mobility sensors, tracking journeys made by car. The time taken to get between locations can then be compared for different dates of reference. The data comes from app data of drivers on specific insurance policies which request vehicle tracking. The data is provided as an anonymous, 'big data' dataset. It reports on various metrics relevant to car insurers such as speed, smoothness and distraction. The travel times are estimated using GPS data with locational measures given a temporal match. Errors in either of these measures, however, would affect the reliability of the journey times calculated. Large organisations such as the DfT complete a process of data validation when using telematics data as a means of quality assurance. Therefore, given the gaps in the data set and potential anomalies it was considered not practicable to report on journey times given the inconsistencies. Furthermore, journey times can also be provided by Transport for London through their "ibus" data, unfortunately they only keep data for two years at a time. Again, not possible to retrieve data over the study period.

In general journey times on the main road network are affected on a daily basis given the nature of traffic mix, volume fluctuations and potential occurrence of incidents at a particular location which can impact on roads on a wider basis.

**1.14 Traffic and Road Safety Analyses (CHN Albert, Dalmally and Elmers)**

<b>Summary of monitoring data from Experimental CHN as compared with Baseline Data</b>				
<b>Ref</b>		<b>CHN Albert Rd</b>	<b>CHN Dalmally Rd</b>	<b>CHN Elmers Rd and CHN Kemerton Rd</b>
	<b>Access Restricted Roads within CHN</b>	Albert Rd / Eldon Rd, Albert Rd / Harrington Rd, Apsely Rd/ Albert Rd and Belfast Rd /Albert Rd	Dalmally Rd j/w Blackhorse Rd	Elmers Rd
<b>Monitoring Themes</b>				
<b>1</b>	<b>Traffic Movements over 24 hrs for 7 days two way</b>			
<b>1a</b>	Traffic Movements in access restricted roads and / or within close proximity of restrictions	<b>Decrease</b> from 1271 vehs to 1121 vehs in Harrington Rd ,	<b>Decrease from</b> 4150 to 3465 vehs across roads within restricted cell	<b>Ave Decrease from</b> 1346 to 995 vehs across restricted roads
<b>1b</b>	Traffic movements in unrestricted roads within CHN	<b>Increase</b> from 1285 to 1545 vehs in Eldon Park CHN	As above	<b>NA</b>
<b>1c</b>	Traffic movements on residential roads just outside of CHN	<b>Decrease</b> from 6890 to 5660 vehs in all roads outside of chn restrictions	N/A	<b>Ave Decrease</b> from 1097 to 839 vehs in roads just outside of restricted area
<b>2 Boundary Roads</b>				
<b>2a</b>	Traffic movements along boundary roads	<b>Decrease</b> from 13068 to 12073 vehs along Portland Rd	<b>Increase</b> from 6225 vehs to 9354 vehs along Morland Rd , Lower addiscombe Rd	<b>Increase</b> from 6225 vehs to 9354 vehs along Morland Rd , Lower addiscombe Rd

		<b>Increase</b> from 19101 to 20211 vehs along Penge Rd		
<b>3</b>	<b>Road Safety</b>			
<b>3a</b>	85%ile speed within cell	<b>Average decrease</b> in 85%ile speed from 23 mph to 18mph in restricted streets	<b>Ave Decrease of</b> 85%ile speeds from 27mph to 22 mph across restricted cell	<b>Ave Decrease</b> in 85%ile speed from 27mph to 23 mph in restricted cell
<b>3b</b>	85%ile speed on boundary roads	average 85ile% speed below 30mph	average 85ile% speed below 30mph	average 85ile% speed below 30mph
<b>3c</b>	Road Collisions within CHN cell 28 months to April 2020	4 (slight)	1 ( slight )	1 ( slight)
<b>3d</b>	Road Collisions within CHN cell 28 months to 2022	3( slight)	3 ( 2 serious + 1 slight)	1 ( slight)
<b>3e</b>	change based on collisions on ave per year over 27 months	1 ( slight)	3 ( 2 serious + 1 slight)	0
<b>3f</b>	Road Collisions on Boundary Roads 28 months to April 2020	137	40	22
<b>3g</b>	Road collision on Boundary Roads 27 months to 2022	161	52	40
<b>3h</b>	change based on collisions per year on ave over 27 months	24	12	18
<b>4</b>	<b>Traffic Mix within CHN cell</b>			
<b>4a</b>	Cycling trends using Smart Sensors	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN
<b>4b</b>	Pedestrian trends using Smart Sensors	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN
	<b>Key</b>			
	<b>Decrease</b>		<b>Increase</b>	

1.15 Traffic and Road Safety Analyses (CHN Holmesdale, Parsons Mead and Sutherland)

	Summary of monitoring data from Experimental CHN as compared with Baseline Data			
Ref		CHN Holmesdale	CHN Parsons Mead	CHN Sutherland
	<b>Access Restricted Roads within CHN</b>	Holmesdale and Elm Park Rd	Parsons Mead and Derby Rd	Sutherland Rd
	<b>Monitoring Themes</b>			
<b>1</b>	<b>Traffic Movements comparing 7 day ave two way movements May 2019 vs May 2023</b>			
<b>1a</b>	Traffic Movements in access restricted roads and / or within close proximity of restrictions	<b>Ave Decrease</b> from 1482 vehs to 901 vehs across most roads within cell.	<b>Decrease of 3287 vehs</b> from 6656 to 3369 vehs in Derby Road	<b>Decrease</b> of 79 vehs from 311 to 232 vehs in Lambeth Rd
				<b>Increase</b> of 21 vehs from 895 to 916 vehs in Fairholme Rd, increase of 121 vehs from 677 to 798 vehs in Pemdevon Rd
<b>1b</b>	Traffic movements in unrestricted roads within CHN	<b>Increase</b> in Dixon Rd from 810 vehs to 1198 vehs	NA	NA
<b>1c</b>	Traffic movements on residential roads just outside of CHN	N/A	NA	<b>Increase of 278 vehs</b> from 930 to 1208 vehs in Priority Road, <b>increase of 972 vehs</b> from 962 to 1934 vehs in Wentworth Rd
<b>2</b>	<b>Boundary Roads</b>			
<b>2a</b>	Traffic movements along boundary roads	<b>Decrease</b> along Park Rd, <b>Decrease</b> along South Norwood Hill, <b>Decrease</b> along South Norwood Hill	<b>Decrease of 14520 vehs</b> ( from 30095 to 15575 vehs) along London Rd, and <b>decrease of 11531</b> ( from 25197 to 13666 vehs) along Sumner Rd.	<b>Decrease</b> in Canterbury Rd
			<b>Increase</b> of 6298 vehs from 26544 to 32842 vehs along Roman Way	<b>Increase</b> of 414 vehs from 20229 to 20643 vehs in Mitcham Rd

<b>3</b>	<b>Road Safety</b>			
<b>3a</b>	85%ile speed within cell	<b>Decrease of 5 mph</b> from 27 mph to 22mph on ave across CHN cell	<b>Decrease of 1.6 mph</b> from 18.8 to 17.2 mph 85%ile speed in Derby Rd, <b>Decrease of 1.7 mph</b> in Lambeth Rd to 14.1 mph	<b>Decrease of 2 mph</b> in Fairholme and Pemdevon to 18 mph
<b>3b</b>	85%ile speed on boundary roads	85%ile speed is below 30mph limit	85%ile speed below 30mph limit	85%ile speed below 30mph limit
<b>3c</b>	Road Collisions within CHN cell 28 months to April 2020	10 ( 2 serious + 8 slight)	6 ( 5 slight + 1 serious)	3 ( slight)
<b>3d</b>	Road Collisions within CHN cell 28 months to 2022	2 ( serious)	6( 5 slight +1 serious)	7 ( slight)
<b>3e</b>	change based on collisions on ave per year over 27 months	8 ( slight)	0	4 ( slight)
<b>3f</b>	Road Collisions on Boundary Roads 28 months to April 2020	53	73	80
<b>3g</b>	Road collision on Boundary Roads 27 months to 2022	64	101	110
<b>3h</b>	change based on collisions per year on ave over 27 months	11	28	30
<b>4</b>	<b>Traffic Mix within CHN cell</b>			
<b>4a</b>	Cycling trends using Smart Sensors	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN
<b>4b</b>	Pedestrian trends using Smart Sensors	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN	<b>Negligible change</b> between March 2022 to March 2023, as smart sensors were introduced post CHN
<b>Key</b>				
<b>Decrease</b>		<b>Increase</b>		

1.16 **Air Quality Assessment:** In general, the main pollutant of concern in Croydon is NO2 and road transport is the main source of NO2 and particulate matter. The average mean objectives for NO2, PM10 and PM2.5 are listed below:

<b>Pollutants</b>	<b>Average Mean Objectives for UK</b> (microgram is a unit of mass equal to one millionth of a gram)
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NO2	40 microgram /m3
PM10	40 microgram /m3
PM2.5	20 microgram /m3

1.17 The traffic control measures implemented as part of the Healthy Neighbourhoods' scheme have the potential to result in air quality impacts from changes in traffic emissions associated with the measures, due to rerouting of traffic near the measures and on the wider road network. Therefore, an air quality assessment<sup>1</sup> was undertaken to determine the potential air quality impacts of the Health Neighbourhoods. To determine the impacts, air quality concentrations were predicted at selected receptors (e.g., residential properties, schools or hospitals) located within each of the Healthy Neighbourhoods and surrounding roads using an air quality model. Traffic data was provided for 2019, before the measures were in place, and for 2022, with the measures in place. To determine the effects of the measures alone, rather than changes to background air quality, changes in vehicle emissions, and traffic growth between 2019 and 2022, the 2019 traffic data was factored to 2022 to enable a fairer comparison of the with and without measures scenarios. Monitoring data was used to verify the model outputs by comparing the annual mean 2022 monitored and modelled concentrations and adjusting the model outputs to account for discrepancies between the monitored and modelled concentrations. The results presented in the table show the receptors within each Healthy Neighbourhood that are predicted to have the largest improvement and largest worsening in NO<sub>2</sub> concentrations resulting from the Healthy Neighbourhood measures. It should be noted that the largest concentrations and changes in concentrations were for NO<sub>2</sub>, and changes in PM<sub>10</sub> and PM<sub>2.5</sub> were determined as being negligible in accordance with best practice guidance significance criteria

### Conclusion:

1.18 As indicated in the table below, it can be concluded that the measures may have resulted in an overall improvement in air quality across most of the Healthy Neighbourhoods, with some receptors seeing a moderate beneficial decrease in NO<sub>2</sub> concentrations. Some receptors were predicted to experience an increase in pollutants as a result of the Healthy Neighbourhoods, which is likely to be due to rerouted traffic on adjacent roads. However, in terms of significance, these increases were negligible in accordance with best practice guidance significance criteria. Pollutant concentrations at all assessed receptors within the Healthy Neighbourhoods and surrounding areas were predicted to be below the Air Quality Strategy objectives for NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>. In addition, there is an overall reduction in emissions of NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO<sub>2</sub> as a result of the Healthy Neighbourhood measures.

### 1.19 Table showing results of assessments

#### ***Modelling Results for the Receptors with the Largest Improvement and Worsening in each Healthy Neighbourhood***

Receptor	Location	Annual Mean NO <sub>2</sub> Concentration (µg/m <sup>3</sup> )			Impact Descriptor using Best Practice Guidance Significance Criteria
		2022 (without measures)	2022 (with measures)	Change	
<b>Holmesdale Road Healthy Neighbourhood*</b>					
HR9	South Norwood Hill	28.3	25.1	-3.2	Slight Beneficial
<b>Elmers Road Healthy Neighbourhood*</b>					
ER6	Lower Addiscombe Road	27.9	26.5	-1.4	Negligible

Dalmally Road Healthy Neighbourhood					
DR8	Lower Addiscombe Road	30.7	24.4	-6.3	Moderate Beneficial
KR9**	Morland Road	22.6	22.7	0.1	Negligible
Kemerton Road Healthy Neighbourhood					
KR13	Lower Addiscombe Road	34.0	31.0	-3.0	Moderate Beneficial
AR9**	Portland Road	22.6	24.5	1.9	Negligible
Parsons Mead Healthy Neighbourhood					
SR1**	Sumner Road	33.9	28.0	-5.9	Moderate Beneficial
PM3	Roman Way	24.9	25.8	0.9	Negligible
Sutherland Road Healthy Neighbourhood					
SR1	Sumner Road	33.9	28.0	-5.9	Moderate Beneficial
SR6	Wentworth Road	22.2	22.4	0.2	Negligible
Albert Road Healthy Neighbourhood					
AR13	Elmers End Road	31.0	27.3	-3.7	Moderate Beneficial
AR9	Portland Road	22.6	24.5	1.9	Negligible

\* At the Holmesdale Road and Elmers Road Healthy Neighbourhoods, none of the selected receptors were predicted to experience worsening in air quality as a result of the Healthy Neighbourhood measures.

\*\* This receptor has an ID associated with a different Healthy Neighbourhood but represents a receptor affected by more than one Healthy Neighbourhood.

	negligible
	slightly beneficial
	moderate beneficial

## Emission Impacts

- 1.20 Total emissions of NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO<sub>2</sub> have been calculated for the 2022 growth-factored (without the measures) and 2022 (with the measures) scenarios. The emissions have been calculated using the entire traffic datasets provided, and therefore take into consideration the impact of all Healthy Neighbourhoods combined. The total emissions are presented in the table below:

### ***Pollutant Emissions Across the Study Area***

	Total NOx Emissions (tonnes/year)	Total PM <sub>10</sub> Emissions (tonnes/year)	Total PM <sub>2.5</sub> Emissions (tonnes/year)	Total Direct CO <sub>2</sub> Emissions* (tonnes/year)	Total Indirect CO <sub>2</sub> e Emissions** (tonnes/year)
2022 growth-factored (without measures)	62.8	10.6	5.6	51,261.6	395.3
2022 (with measures)	48.3	8.4	4.4	40,819.1	295.2
Change in emissions	-14.5	-2.2	-1.2	-10,442.5	-100.1

\*Direct CO<sub>2</sub> includes emissions from the vehicle tailpipe.

\*\* Indirect CO<sub>2</sub>e (CO<sub>2</sub> equivalent) emissions are associated with the charging of the batteries of electric and plug-in hybrid

The results indicate that there is predicted to be a decrease in emissions across the study area for all pollutants with the Healthy Neighbourhoods in place. CO<sub>2</sub> does not have a direct impact on human health, however, it is a greenhouse gas and therefore the total change in emissions for this pollutant has also been considered. The CO<sub>2</sub> emissions are split into direct emissions, which include emissions directly from the vehicle, and indirect CO<sub>2</sub>e emissions, which are the emissions associated with electric vehicle charging. Overall, there is predicted to be a decrease in total emissions of all pollutants across the study area, with the Healthy Neighbourhood measures in place.

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