

13 June 2023 at 7.00 pm

Council Chamber, Argyle Road, Sevenoaks

Published: 05.06.23



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[https://www.youtube.com/channel/UCIT1f\\_F5OfvTzjZk6Zqn6g](https://www.youtube.com/channel/UCIT1f_F5OfvTzjZk6Zqn6g)

# Cleaner & Greener Advisory Committee

## Membership:

Chairman: TBD; Vice-Chairman, TBD

Cllrs. Abraham, Alger, Barker, Clack, G. Darrington, Kitchener, Morgan, Roy, Shea, Varley and White

## Agenda

There are no fire drills planned. If the fire alarm is activated, which is a continuous siren with a flashing red light, please leave the building immediately, following the fire exit signs.

	Pages	Contact
Apologies for Absence		
1. Appointment of Chairman		
2. Appointment of Vice Chairman		
3. Minutes	(Pages 1 - 4)	
To agree the minutes of the meeting of the Committee held on 14 March 2023, as a correct record.		
4. Declarations of Interest		
Any interests not already registered.		
5. Actions from Previous Meeting (if any)		
6. Update from Portfolio Holder		
7. Referral from Cabinet or the Audit committee (if any)		
8. Role of the Advisory Committee and Key Challenges	(Pages 5 - 6)	Richard Morris Tel: 01732 227430
9. Active Travel Update	(Pages 7 - 12)	Emma Henshall Tel: 01732227358

- |   |                   |                                     |
|---|-------------------|-------------------------------------|
| 10. <b>Update on Car Idling Campaign</b>      | (Pages 13 - 22)   | Nick Chapman<br>Tel: 01732 227167   |
| 11. <b>Air Quality Assessment Swanley</b>     | (Pages 23 - 68)   | Nick Chapman<br>Tel: 01732 227167   |
| 12. <b>Liability for Trees on Common Land</b> | (Pages 69 - 76)   | Trevor Kennett<br>Tel: 01732 227407 |
| 13. <b>Government's Resilience Framework</b>  | (Pages 77 - 168)  | Trevor Kennett<br>Tel: 01732 227407 |
| 14. <b>Work Plan</b>                          | (Pages 169 - 170) |                                     |

#### EXEMPT INFORMATION

At the time of preparing this agenda there were no exempt items. During any such items which may arise the meeting is likely NOT to be open to the public.

If you wish to obtain further factual information on any of the agenda items listed above, please contact the named officer prior to the day of the meeting.

Should you need this agenda or any of the reports in a different format, or have any other queries concerning this agenda or the meeting please contact Democratic Services on 01732 227000 or [democratic.services@sevenoaks.gov.uk](mailto:democratic.services@sevenoaks.gov.uk).

**CLEANER & GREENER ADVISORY COMMITTEE**

Minutes of the meeting held on 14 March 2023 commencing at 7.00 pm

Present: Cllr. McArthur (Chairman)

Cllr. Roy (Vice Chairman)

Cllrs. Andrews, Barnett, Dr. Canet, Collins, G. Darrington, Griffiths, and Raikes

Apologies for absence were received from Cllrs. Bayley

Cllrs. P. Darrington and Foster were also present.

Cllr. Harrison was also present via a virtual media platform that did not constitute attendance as recognised by the Local Government Act 1972.

35. Minutes

Resolved: That the Minutes of the meeting held on 6 December 2022 be approved and signed by the Chairman as a correct record.

36. Declarations of Interest

There were none.

37. Actions from Previous Meeting

There were none.

38. Update from Portfolio Holder

The Portfolio Holder, and Chairman, gave an update on the services within her portfolio. One of the Food and Safety Team Officers was leaving their role to work at another local authority, and recruitment for the position would begin soon. The team undertook 100% of all higher risk food inspections, and 129% of lower risk inspections in February. There had been 99 new food business registrations in 2022/23. There had been 259 Environmental Protection service requests in February alone.

The Car Idling Project had been completed, with 66 entries from 5 schools within the District. Each school had 3 prize winners, with an overall District winner who received an additional £50 voucher prize. All participating schools were visited, and four hosted assemblies by the Leader of the Council and the Environmental Health Manager about vehicle idling and the campaign. The Council aimed to present the schools with posters and banners against vehicle idling by summer.

## Agenda Item 3

### Cleaner & Greener Advisory Committee - 14 March 2023

The Environmental Health Team would bring an options report on the Out of Hours Service to the Committee in the future following the overturning of the SCIA by Cabinet. The Food and Safety team were also considering options regarding charging for pre-opening advice.

The Licensing Partnership achieved a majority of its key performance indicators at 100% across 2022. A new member of staff joined the Hub Team on 1<sup>st</sup> March after the Partnership Board agreed to provide some additional resource. The Council's Licensing Team brought a review against a problem premises within Sevenoaks Town for the first time, and the issue was currently resolved following a suspension and the imposition of stronger conditions. Aged debt was at an all-time low with a majority of annual fees being collected.

The Council had been invited by Historic England to undertake a national pilot for Heritage Crime Officer training - the first local authority to do so. This would enable the Direct Services team to work in partnership with Historic England and the police to protect the District's heritage environment. The Team also participated in the Kent Resilience Forum's FloodEx exercise in Maidstone to test flood plans across the County. The Bradbourne Lakes National Lottery Heritage Fund application was resubmitted at the end of February, and the Mill Pond desilting works were underway.

#### 39. Referral from Cabinet or the Audit committee

There were none.

#### 40. Pre-Application Fees - Review

The Chairman presented the report, which set out the proposed changes to pre-application advice charges. The Chairman explained that the fees were being restructured to clarify the process and help customers understand the different levels of advice available. Additional fees were being brought in for assisting with temporary event notices, updating records for lottery registrations, and for raising replacement invoices when requested by licence holders, to help cover costs.

The Committee discussed the report.

Resolved: That

- a) It be recommended to Cabinet that the restructured fees for Licensing pre-application advice be approved; and
- b) That it be recommended to Cabinet that the introduction of some new smaller admin fees to cover the resourcing cost of providing the service, be approved.

#### 41. Environmental Protection Service Plan

The Chairman presented the report, which outlined the how the Environmental Health Team would discharge its statutory obligations with regards to Statutory Nuisance, Animal Welfare, and Licensing and Environmental Permitting Regulations for the upcoming year. The report also outlined the volume of work undertaken by the team, and how it had streamlined its processes with technology to cope with increase workloads with current resources.

In response to questions, the Environmental Protection Team Leader explained that the team were awaiting clarification from central government on their duties under the Clean Air Act with regards to combatting particulate emissions from electric vehicles. The Officer further explained that most of the drainage issues in the District were the remit of sewage undertakers or the land drainage board. The Council helped advocate on behalf of residents but generally lacked the statutory powers to act. The Committee heard that the team had previously charged for land searches for contaminated sites, but that changes in the Council's software prevented the team from making the reports now. This was being examined as a possible future revenue source. The Officer clarified that most contaminated land sites did not meet the criteria in the Environmental Protection Act Part 2A, and were addressed through the planning process rather than the Environmental Protection Team.

Resolved: That it be recommended to Cabinet that it recommends to Council that the Environmental Protection Service Plan 2023/24 be approved.

#### 42. Active Travel and Net Zero 2030 Update

The Chairman presented the report, which updated the Committee on the Council's active travel initiatives. The Committee discussed the report. In response to questions, the Principal Infrastructure Delivery Officer explained that the plans aimed to strike a balance between the proposed East-West Sevenoaks cycle route and the need for on street parking, and that different options would be presented at the public consultation.

The Officer further explained that the £10,000 grant from Active Travel England was for feasibility work for the Sevenoaks to Otford cycle route, and that much of this would be built on previous detailed work. The most significant changes were likely to be related to the cost of delivering the route, due to national economic changes. The interconnection between Route 1 and Route 6 would help reduce consultancy costs. The Local Cycling and Walking Infrastructure Plan (LCWIP) took into account all planned and proposed developments. Site promoters were actively engaged with when making the plan, to ensure the infrastructure would support future developments.

She further advised the Committee that the LCWIP aimed to lead behavioural changes by providing infrastructure to make cycling and walking safer and a more attractive option in busy urban areas. The consultancy work followed national guidance on cycle infrastructure design (LTN 1/20), which sought to achieve segregation of cycling and walking from cars wherever possible. Stakeholder

## Agenda Item 3

### Cleaner & Greener Advisory Committee - 14 March 2023

engagement was a priority of the LCWIP also, to ensure that the needs of residents, interested parties and local Members would be met. This would involve understanding risks, such as private land ownership, and working to overcome them.

Resolved: That the report be noted.

#### 43. Work Plan

The Work Plan was noted.

THE MEETING WAS CONCLUDED AT 19:40

CHAIRMAN

## ROLE OF THE ADVISORY COMMITTEE AND KEY CHALLENGES

### Cleaner and Greener Advisory Committee - 13 June 2023

**Report of:** Deputy Chief Executive and Chief Officer - Finance and Trading

**Status:** For Information

**Key Decision:** No

**Portfolio Holder:** Cllr. Margot McArthur

**Contact Officers:** Adrian Rowbotham, Ext. 7153

Richard Morris, Ext. 7139

**Recommendation to Cleaner and Greener Advisory Committee:**

That the report be noted.

### Introduction and Background

- 1 The purpose of this report is to provide details of the role of the Committee and the areas of responsibility including the key issues and challenges facing those areas.
- 2 The Terms of Reference are listed below and there will be a short presentation explaining the relevant service areas.

### Terms of Reference

- 3 The following terms of reference are taken from Appendix R of the Council's Constitution.
- 4 Each Cabinet Advisory Committee shall:
  - (a) undertake policy initiation and development;
  - (b) consider such other matters as are referred to it by the Portfolio Holder;
  - (c) at the request of either Cabinet or the Audit Committee carry out specific research and development projects and to submit recommendations to Cabinet; and
  - (d) develop and approve its annual work plan ensuring that there is efficient use of the Committee's time.

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- (e) The Cabinet Member be requested to provide a report to each meeting outlining their activities since the previous meeting and any decisions they intend to take in the following three months.
- 5 Within the areas of responsibility of: Direct Services, Street Cleansing, Waste & Recycling, CCTV, Environmental Health, Green Spaces, Parking, Pest Control, Licensing, Emergency Planning, Air Quality, Delivery Partner Assurance, Wellbeing.
- 6 The Cabinet Advisory Committees are to ensure that there is mutual respect and co-operation with all other Committees within the Council.

### Key Implications

#### Financial

None.

#### Legal Implications and Risk Assessment Statement

None.

#### Equality Assessment

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

#### Net Zero Implications

The decisions recommended through this paper have a remote or low relevance to the council's ambition to be Net Zero by 2030. There is no perceived impact regarding either an increase or decrease in carbon emissions in the district, or supporting the resilience of the natural environment.

#### **Appendices**

None

#### **Background Papers**

None

**Adrian Rowbotham**

**Deputy Chief Executive and Chief Officer - Finance & Trading**



**ACTIVE TRAVEL UPDATE**

**Cleaner and Greener Advisory Committee - 13 June 2023**

**Report of:** Deputy Chief Executive and Chief Officer - Planning and Regulatory Services

**Status:** For information

**Also considered by:** N/A

**Key Decision:** No

**Executive Summary:** This report updates members on the active travel initiatives that the District Council is engaged in, along with the funding opportunities that are being pursued in order to facilitate the delivery of specific projects, supported by the Movement Strategy (2022) and emerging Local Plan.

**This report supports the Key Aim of:** the Council's commitments to promoting better active travel and working towards Net Zero 2030.

**Portfolio Holder:** Cllr. Margot McArthur

**Contact Officer(s):** Emma Henshall, Ext. 7358

**Recommendation to Cleaner and Greener Advisory Committee:**

To note this update report for information.

**Reason for recommendation:** Identifying opportunities for better active travel across the District is a key priority that can assist in reducing carbon emissions, improve air quality and result in positive health outcomes, as well as helping work towards the Council's Net Zero 2030 commitment.

**Introduction and Background**

- 1 Active travel has many benefits - walking, wheeling and cycling can all help to positively impact the health of the population and bring significant environmental benefits including improving air quality, reducing noise pollution and reducing traffic and therefore carbon emissions. The Council is committed to promoting and creating opportunities for better active travel in the District through its Movement Strategy (2022) and emerging Local Plan.

## Agenda Item 9

- 2 The Sevenoaks Urban Area Local Cycling and Walking Infrastructure Plan (LCWIP) was completed and launched earlier this year and identifies a number of walking, wheeling and cycling improvements that are required at the local level, with a view to developing local networks over the longer term. Work is now ongoing to progress a number of these suggested improvements, and specific project updates are set out below.

### ***Sevenoaks Town east to west walking, wheeling and cycling route (LCWIP route 3)***

- 3 This route connects the east and west of Sevenoaks town, connecting together 6 schools and local facilities to provide a safe and accessible walking, wheeling and cycling route as an alternative to short car journeys. The route is mapped at Appendix 1 (route 3 - turquoise). We have been working with KCC to design the route, which has recently opened for public consultation. The consultation runs until 14 July 2023 and seeks views on the proposed route, including a number of design options. Full details of the consultation are available online here: [www.sevenoaks.gov.uk/walkwheelcycle](http://www.sevenoaks.gov.uk/walkwheelcycle)
- 4 Once the public consultation has closed, we will take on board all feedback received before tweaking and finalising the route. It is hoped that construction will begin in early 2024 with the route opening later the same year.

### ***Sevenoaks to Otford Route (LCWIP route 1)***

- 5 This route connects Sevenoaks town centre with Otford village centre including making significant improvements to the A225 and to the very busy Bat and Ball junction. The route is mapped at Appendix 1 (route 1 - green).
- 6 We have secured £184,000 from the latest round of Active Travel England funding which allows us to progress the scheme to detailed design stage. We are therefore working efficiently to appoint consultants to update feasibility work undertaken in 2017 and to prepare an outline design for the scheme, which will include local stakeholder engagement. It is anticipated that this work will be completed by the end of the year. The detailed design work will then follow in early 2024 and this will put us in an advantageous position to bid for funding for the construction of the route. Given the significant constraints and challenges along the southern part of the route from Bat and Ball down to Sevenoaks, the abovementioned work will prioritise the northern section of the route from Otford to Bat and Ball.

### ***Sevenoaks to Seal to Otford Route (LCWIP route 6)***

- 7 This route connects Sevenoaks town centre with Seal and links through the proposed Sevenoaks Quarry development (conceptually at present) to connect through to the Riverside Retail Park south of Otford. The route is mapped at Appendix 1 (route 6 - pink).

- 8 We are in the process of procuring consultants to undertake scheme planning and design work for this route, which will include local stakeholder engagement and engagement with the Sevenoaks Quarry developer to understand what might be achievable. It is anticipated that this work will be completed by the autumn.

### ***Swanley Urban Area LCWIP***

- 9 Consultants Sustrans have now been appointed and work on the Swanley Urban Area LCWIP is underway. The focus is on improving opportunities to walk, wheel or cycle around the town, including improving user safety and experience. The routes will help better connect areas and destinations within the town and provide a safe and attractive alternative to car travel. Local stakeholder engagement will take place towards the end of June. It is anticipated that the LCWIP will be completed by the end of the year.

### ***Workplace Travel Plan***

- 10 A Workplace Travel Plan sets out a package of initiatives and incentives to encourage safe, healthy and sustainable travel options. Our current Plan dates back to 2011, but since then we have seen significant changes in working patterns along with the Council's aspirations in relation to air quality, movement and working towards Net Zero 2030.
- 11 Work has therefore begun on a new Workplace Travel Plan, which focuses on inspiring behaviour change through a 'change for one day' initiative. A staff survey has recently been undertaken to capture current travel preferences and barriers to change. This was really well responded to and will inform the development of the Plan going forward. We aim to launch the new Plan in July 2023.

### **Other options Considered and/or rejected**

The active travel initiatives referred to in this report have largely been secured and/or completed using external funding from Active Travel England and in partnership with KCC. We could choose not to engage in further active travel initiatives, through external funding streams or our own budget, however this would contradict the Council's commitment to promoting and creating opportunities for better active travel in the District, and therefore disadvantage our residents. This is not considered to be an acceptable approach. Further, the Council has made a commitment to working towards Net Zero 2030.

### **Key Implications**

#### Financial

Funding for the active travel initiatives referred to in this report has been secured through external sources and it is not expected that any top up will be required. Funding for the Workplace Travel Plan will be met from existing budgets.

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### Legal Implications and Risk Assessment Statement

No legal implications have been identified.

### Equality Assessment

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

### Net Zero Implications

Members are reminded of the Council's stated ambition to be Net Zero with regards to carbon emissions by 2030. This report is to inform members of the ongoing work to meet the commitment.

### **Conclusions**

This report updates members on the active travel initiatives that the District Council is engaged in. It is considered that progress so far is consistent with working towards Net Zero by 2030.

#### **Appendices**

Appendix 1 - Cycle Routes identified in the Sevenoaks Urban Area LCWIP

#### **Background Papers**

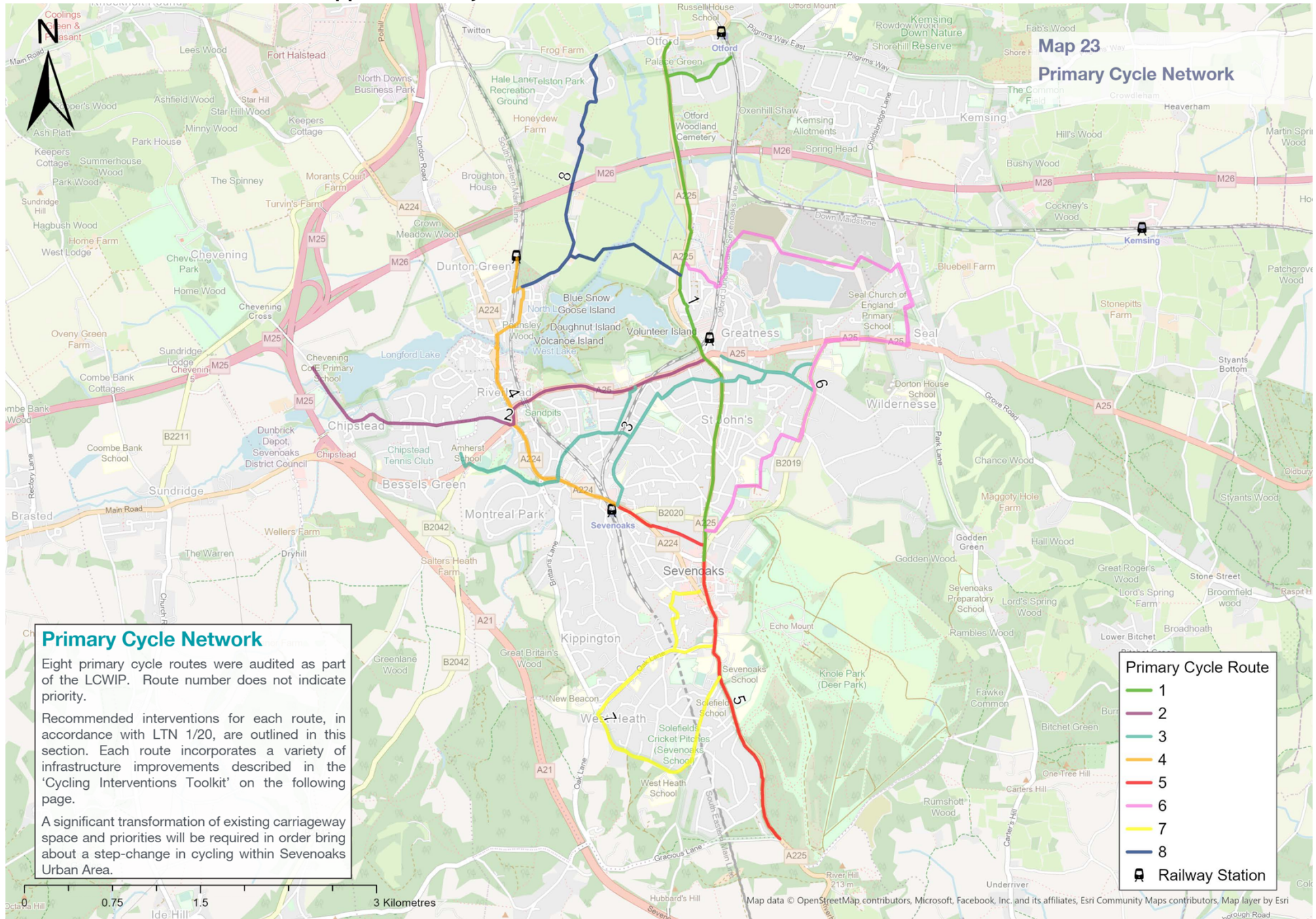
None

**Richard Morris**

**Deputy Chief Executive and Chief Officer - Planning and Regulatory Services**

# Appendix 1 - Cycle Routes identified in the Sevenoaks Urban Area LCWIP

**Map 23**  
**Primary Cycle Network**



### Primary Cycle Network

Eight primary cycle routes were audited as part of the LCWIP. Route number does not indicate priority.

Recommended interventions for each route, in accordance with LTN 1/20, are outlined in this section. Each route incorporates a variety of infrastructure improvements described in the 'Cycling Interventions Toolkit' on the following page.

A significant transformation of existing carriageway space and priorities will be required in order bring about a step-change in cycling within Sevenoaks Urban Area.

### Primary Cycle Route

- 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - 8
- Railway Station

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**AIR QUALITY- VEHICLE IDLING CAMPAIGN & UPDATE**

**Cleaner & Greener Advisory Committee - 13 June 2023**

**Report of:** Deputy Chief Executive and Chief Officer Planning and Regulatory Services

**Status:** For Consideration

**Also considered by:** N/A

**Key Decision:** No

**This report supports the Key Aim of:** Green Environment & Healthy Environment

**Portfolio Holder:**

**Contact Officer(s):** Nick Chapman, Ext. 7167 / Holly Harris, Ext. 7116

**Recommendation to Cleaner & Greener Advisory Committee:**

That the contents of the report be noted.

**Reason for recommendation:**

To update Members on the vehicle idling campaign which correlates to Measures 11 and 12 from the Air Quality Action Plan 2022.

To provide Members with an insight into our two new campaigns which we are in the process of implementing.

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### Introduction and Background

- 1 Sevenoaks District Council is required to produce an Air Quality Action Plan (AQAP) which details measures it intends to take to mitigate air pollution within its designated Air Quality Management Areas (AQMA) over the next 5 years. We released this document in summer 2022.
- 2 Within the AQAP there are 32 measures. Measure 11 is to reducing vehicle idling and Measure 12 is Educational campaigns for schools. The Air Quality Promotions Officer (AQPO) developed an engagement campaign which was delivered with schools in September/ October 2022.

### The Idling Campaign

- 3 Every school (primary & secondary) within the district was emailed on two occasions in summer 2022 and a paper letter sent out to them in autumn 2022 to gain interest in the campaign.
- 4 We received replies back from 15 schools across the district who wanted to be involved in the campaign in a variety of ways.
- 5 We distributed our poster competition resources to all schools who replied. We ultimately collected posters from 5 schools in December 2022. In total, we received 66 entries from these 5 schools across the district (Westerham, Swanley, Shoreham, and Sevenoaks x2).
- 6 In January 2023, the entries were judged by Cllrs Fleming, McArthur and Hunter, along with colleagues in the Communications Team and the Air Quality Promotions Officer (AQAP). Owing to the quality of entries received, each school was awarded a 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place entry. Each winner received a WHSMITH voucher for their entry varying from £10, £20 or £30.
- 7 Of the five 1<sup>st</sup> place entries, an overall district winner was decided and they received an additional £50 voucher. In total, Environmental Health awarded £350 in WHSMITH vouchers to winners throughout the district.
- 8 In February 2023, the AQPO arranged with the five schools to return with Cllr Fleming and a photographer. We returned the posters and presented certificates to all students who entered, along with a certificate and prizes for the winners. In 3/5 of the schools, Cllr Fleming and the AQPO gave whole school assemblies on the idling campaign and in 1/5 they gave an extended eco assembly which included the idling campaign.
- 9 Within each school, photographs were taken of the winners with their posters with Cllr Fleming and other Cllrs for the wards of those schools if they were able to attend. These were then used within InShape along with an article on the idling campaign.
- 10 In March 2023, the print studio were asked to design banners/posters for the schools to choose from to display outside their premises. These were in two designs - one with the district winner's poster and SDC designs and one



without with just SDC designs. These could then be selected in a large banner, small banner or posters within the A size ranges.

- 11 Unfortunately, production of the banners was delayed during the election period but we believe these will be available to issue to participating schools shortly.
- 12 The next stage of the campaign will include reaching out to all the schools within the district and asking them to pick a poster/banner to display outside their gates to inspire drivers to support the campaign. We will also target other locations where children will be on a regular basis such as scout huts, day cares, etc.
- 13 We will conduct a survey to monitor a select number of schools who request banners and posters. This will involve obtaining data from locations outside schools to quantify how many drivers are seen idling prior to banners being installed and after. This will help us assess the impact of the campaign. We will repeat this survey 3 months after banner installation to see if the impact has been significant in comparison to the first figures collected.
- 14 Where we identify an idling vehicle our officers will challenge this behaviour informally providing advice. We do not currently intend to issue fines for idling and will focus on awareness and changing behaviours.
- 15 The AQPO will also be sending out resources to support schools to run their own independent idling campaigns with their students. The AQPO will be designing resources for schools to use, such as lesson resources, letters to parents and presentations.

#### **PM<sub>2.5</sub>**

- 16 The Environment Act 2021 committed the government to introducing new limits for PM<sub>2.5</sub>. In April 2023, DEFRA consulted on its Draft Air Quality Strategy that proposed the following limits:
  - a. an annual mean concentration target for PM<sub>2.5</sub> of 10 µg/m<sup>3</sup> by 2040 and an average population exposure reduction target of 35% in 2040 compared to a 2018 baseline
  - b. An interim target of 12 µg/m<sup>3</sup> by 2028 and an average population exposure reduction target of 22% in 2028 compared to a 2018 baseline.
- 17 Domestic combustion is a major source of particulate matter emissions in 2021, accounting for 16 per cent of PM<sub>10</sub> emissions and 27 per cent of PM<sub>2.5</sub> emissions.
- 18 Most emissions from this source come from households burning wood in closed stoves and open fires. Within the rural areas of Sevenoaks District, we are aware that many properties rely on solid fuel to keep their properties warm. Wood burners are also become increasingly popular for aesthetic reasons.

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- 19 The use of wood as a fuel accounted nationally for 75 per cent of PM<sub>2.5</sub> emissions from domestic combustion in 2021. Emissions of PM<sub>2.5</sub> from domestic wood burning increased by 124 per cent between 2011 and 2021, to represent 21 per cent of total PM<sub>2.5</sub> emissions in 2021.
- 20 In late 2023/24, the AQPO will lead on two campaigns focused around PM<sub>2.5</sub> awareness and domestic burning education.
- 21 Our campaign(s) will focus on three main elements:
- a. Monitoring  
We aim to either relocate our existing AQ mesh monitor or purchase portable monitoring devices which we can install in our rural communities. This will provide us with the data we need, for example, areas and times of day with highest emissions. This will inform us of patterns and trends within our rural areas, which we hope will support the need for education of domestic burning.
  - b. Engagement with parishes  
Local parish engagement will be crucial in these campaigns. Their support in community awareness and education will help reinforce the need to reduce the emissions in our rural communities.
  - c. Advice  
Communicating this information with residents will be the main source aim of this campaign. This will be in the form of:
    - Promotional activities to demonstrate the health impact of such emissions in rural communities and methods for reducing such emissions.
    - Targeted advice to residents to warn and inform of the air quality and health impacts associated with bonfires.
- 22 This supports the Burn Better information campaign which Defra launched the in 2020. This aimed to raise awareness about the impact of domestic burning in the air we breathe to reduce air pollution from domestic burning. The initiative encouraged solid fuel users to make positive changes to their burning habits, including using better quality fuels, getting their chimney swept or upgrading their appliances.

### **Defra Funding Grants**

- 23 In March, we found out they were unsuccessful in our individual application for funding provided for Air Quality. We were however successful in our joint bid with Medway and Kent Air Quality Partnership.
- 24 This bid will fund a joint Kent-wide web portal designed to support healthcare professionals communicate air quality health impacts and methods of reducing exposure. Materials on the portal will include e-

learning and resources, certified and accredited training as well as printable materials for patients.

- 25 We will be working with colleagues in both Communications and Health Teams to release this information. We will be able to provide an update on this later in the year, when we receive more information from the Medway and Kent Air Quality Partners.
- 26 We will be bidding again for future funding opportunities, for applicable projects when they become available.

### **Key Implications**

#### Financial

None

#### Legal Implications and Risk Assessment Statement.

None

#### Equality Assessment

The information in this paper has a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

#### Net Zero Implications

The decisions recommended through this paper have a remote or low relevance to the council's ambition to be Net Zero by 2030. There is no perceived impact regarding either an increase or decrease in carbon emissions in the district, or supporting the resilience of the natural environment.

### **Appendices**

Appendix A - Winning Vehicle Idling Posters- 2023

**Richard Morris**

**Deputy Chief Executive and Chief Officer - Planning & Regulatory Services**

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District Winner - Lady Boswells

TURN OFF YOUR

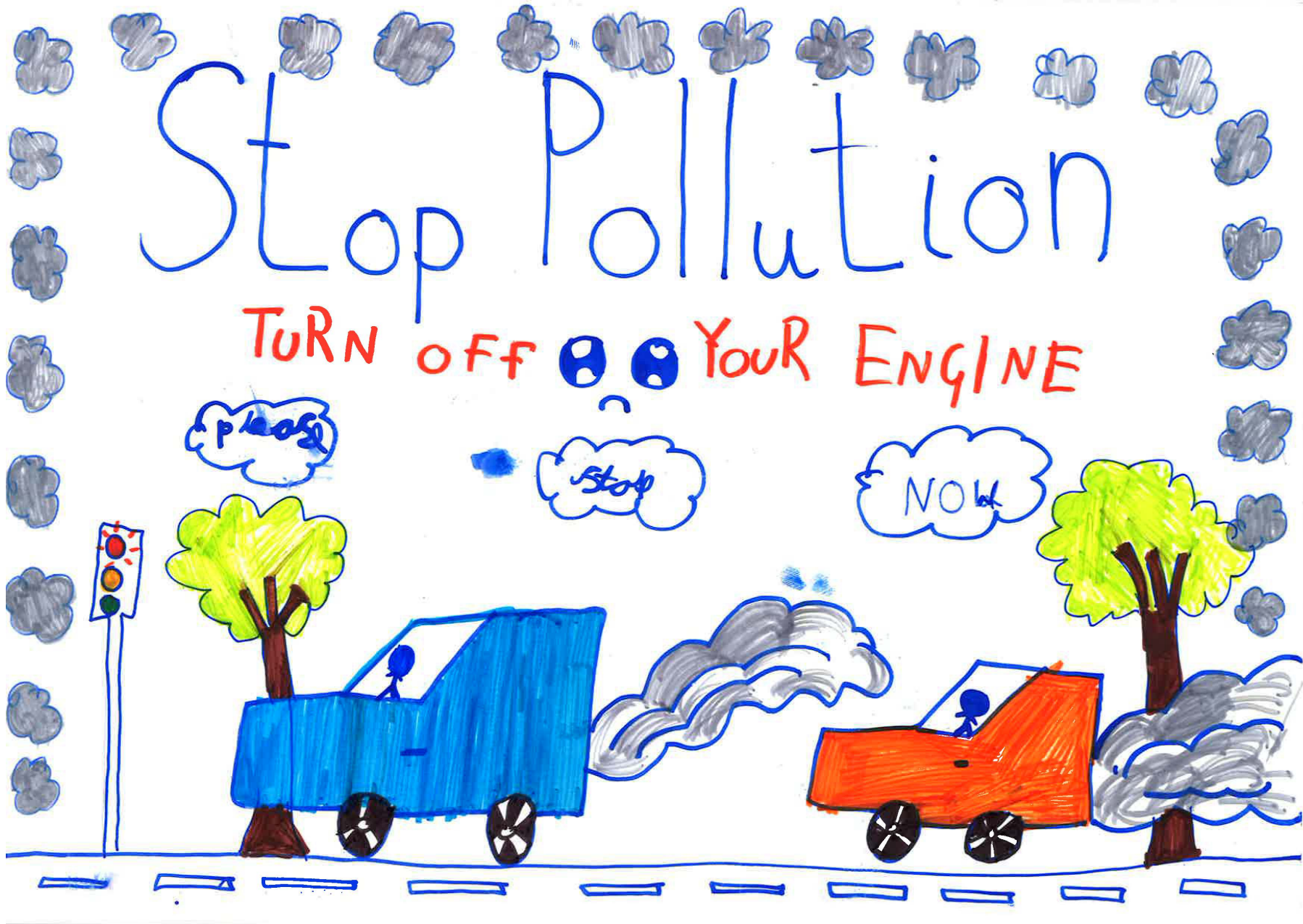
Did you know that men on the School Run are 50% more likely to leave the engine running than Women! TURN IT OFF

ENGINE

STOP idling



1<sup>st</sup> Place Churchill School



Don't Let us Choke



On your engine  
Smoke



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1<sup>st</sup> Place High Firs School

SAVE THE OAKS



DONT BLOW OUT  
SMOKE!

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1<sup>st</sup> Place Sevenoaks Prep



**SWANLEY AIR QUALITY MANAGEMENT AREA ASSESSMENT**

**Cleaner & Greener Advisory Committee- 13<sup>th</sup> June 2023**

**Report of:** Richard Morris- Deputy Chief Executive and Chief Officer- Planning & Regulatory Services

**Status:** For Consideration

**Also considered by:**

- Not Applicable

**Key Decision:** No

**This report supports the Key Aim of:** Our Environment- Ensure the design and location of new development takes account of the need to improve air quality through the Local Plan in line with Sevenoaks District Council's Air Quality Action Plan.

**Portfolio Holder:** Cllr McArthur

**Contact Officer:** Nick Chapman, Ext. 7160

**Recommendation to Cleaner & Greener Advisory Committee:**

To note the contents of this report and the technical study of the Swanley AQMAs in Appendix A

**Reason for recommendation:** Measure 23 of the Air Quality Action Plan 2022-2027 (approved by Council in April 2022) committed the District Council of undertaking a technical assessment of the existing Air Quality Management Areas in Swanley. This report outlines the key findings of the study and helps officers, residents and councillors to understand potential threats to air quality in the Swanley area.

## Introduction and Background

- 1 In April 2022, the District Council adopted its new Air Quality Action Plan 2022-2027 (AQAP).
- 2 In preparation of this AQAP, the District Council had commissioned a specialist contractor to undertake a review of our existing Air Quality Management Areas (AQMA). This study sought to review existing air quality and traffic data across the district to re-ratify the existing AQMA boundaries.
- 3 Unfortunately, whilst commissioning this work, it became clear that insufficient, up to date traffic data existed within the Swanley area. It was therefore not possible to undertake such a review within the production timescales of the AQAP. Consequently we progressed the AQAP on the assumption that the areas would remain as they had been declared in 2006 (AQMA 8- London Road (East), High Street, Bartholomew Way and parts of central town area) and 2014 (the junction of London Road and Birchwood Road).
- 4 Nevertheless, Officers and Councillors recognised that it was necessary and appropriate for a review of the Swanley AQMAs to take place. Our commitment to this action was outlined in 'Measure 23' of the AQAP.
- 5 This technical report has now been completed by our specialist contractor and is provided for consideration in Appendix A.

## Key findings of the technical assessment

- 6 The model predicted no exceedances of Air Quality Objectives outside of the existing AQMA boundaries. Therefore, there is no need/ requirement to extend the existing AQMAs.
- 7 The model did predict likely exceedances of the annual NO<sub>2</sub> objective level along the High Street, near to the junction of Bevan Place (AQMA 8). Development in this area has already created a partial street canyon and additional monitoring is required to establish if this will result in a deterioration of air quality for residents over the next few years.
- 8 Source apportionment indicates that in AQMA 8, diesel cars account for 34.5% of emissions, diesel LGVs 21.5%, HGVs 19.6% and petrol cars 6.9%. Background emissions account for 16.3% with bus, coaches and motorcycles accounting for the remaining 1.3%
- 9 The Environmental Health Team will continue monitoring Air Quality in this location and will review establishing monitoring locations at 1<sup>st</sup> floor levels in order to accurately reflect residential exposure along the High Street.
- 10 The model and monitoring data predicts exceedances of the Air Quality Objectives for NO<sub>2</sub> at the Junction of Birchwood Road and London Road (AQMA 14). This AQMA will therefore be retained and as per the report recommendations, we will consider deploying additional monitoring in this area.

- 11 Source apportionment indicates that within AQMA 14, diesel cars account for 30.6% of emissions, diesel LGVs 20.8%, HGVs 15.7% and petrol cars 5.3%. Background emissions account for 26.7 % with bus, coaches and motorcycles accounting for the remaining 0.9%

### Next Steps

- 12 The District Council will undertake a review of the actions within the current AQAP to ensure that they remain relevant in light of this technical study. We will also consider if it is appropriate to add additional measures to address areas of concern highlighted by the report.
- 13 The source apportionment for AQMAs 8 & 14 suggests that it remains important for the District Council to reduce the number and use of diesel vehicles across the district and reaffirms the need for following measures within the AQAP:
- Measure 7- Promotion of active travel schemes
  - Measure 8- Development of new walking and cycle routes
  - Measure 9- District wide promotion of active travel
  - Measure 11- Reducing vehicle idling
  - Measure 12- Educational campaigns for schools
  - Measure 14- Transitioning the Council's fleet to low emission vehicles
  - Measure 15- Improving and developing the EV infrastructure within the district
  - Measure 16- Installing EV charging points within all Council owned car parks
  - Measure 17- Improving public transport infrastructure
  - Measure 18- Promote the use of public transport
  - Measure 20- Car Club/ sharing schemes
  - Measure 21- Exploring flexible working and home working
  - Measure 22- Walking to school incentives/ encouragement
  - Measure 26- To work with businesses to identify ways to reduce emissions from their activities
  - Measure 31- To work with business operators to increase the % composition of LEV within private fleets
  - Measure 32- To increase the number of Taxi operators using LEV and EV vehicles
- 14 The District Council will need to consider this technical report when assessing applications for development within AQMA 8 and AQMA 14.

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## Key Implications

### Financial

N/A

### Legal Implications and Risk Assessment Statement.

It is a legal requirement for the District Council to declare Air Quality Management Areas where monitoring indicates that air quality fails to meet specified objective levels. The District Council has a legal duty to identify and implement measures to improve air quality/ reduce receptor exposure within an AQMA. These measures are outlined within our existing Air Quality Action Plan 2022-2027

### Equality Assessment

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

### Net Zero Implications

Whilst the District Council's Air Quality work aligns and supports our Net Zero ambitions, the decisions recommended through this paper have a remote or low relevance to the council's ambition to be Net Zero by 2030. There is no perceived impact regarding either an increase or decrease in carbon emissions in the district, or supporting the resilience of the natural environment

### Environmental Impact

This report supports the District Council's commitment to improving air quality.

#### **Appendices**

Appendix A - Detailed Assessment of Swanley AQMAs- November 2022

#### **Background Papers**

- [Air Quality Action Plan 2022 | Sevenoaks District Council](#)
- [2022 Air Quality Annual Status Report | Sevenoaks District Council](#)

**Richard Morris**

**Deputy Chief Executive and Chief Officer - Planning & Regulatory Services**



**Sevenoaks District Council**  
*Detailed Assessment of Swanley AQMAs*  
November 2022





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## Document Control Sheet

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## Executive Summary

Bureau Veritas have been commissioned by Sevenoaks District Council to complete a review of the Council's existing Air Quality Management Areas (AQMAs) within the Swanley Area following the publication of their Air Quality Action Plan (AQAP). The Council currently have two AQMAs within Swanley, both have been declared in relation to traffic emissions, designated for exceedances of the NO<sub>2</sub> annual mean Air Quality Strategy objective. The AQAP was developed to assess and improve air quality in the declared AQMAs within Sevenoaks. However, the two AQMAs within Swanley were not assessed due to the lack of available and representative traffic data for use within the detailed assessment, caused by the COVID-19 pandemic. The Council however consider it important to quantify the existing air quality within these AQMAs now that representative traffic data is available.

A dispersion modelling assessment has been completed whereby NO<sub>2</sub> concentrations have been predicted across all relevant areas within and around the Swanley AQMAs at both specific receptor locations, and across a number of gridded areas to allow the production of concentration isopleths. This has been used to supplement local monitoring data to provide a clear picture of the pollutant conditions within the borough.

Following the completion of the analysis of both monitoring data and modelled concentrations across all of the assessed areas a number of recommendations have been made in terms of the AQMAs within Swanley:

- **AQMA No.8 Swanley Town Centre** – Exceedances have been predicted by the model along the High Street, near to the junction of Bevan Place. It is believed that residential receptors are located here at 1<sup>st</sup> floor level. A small two-sided street canyon has been modelled in this area, as identified by a development taking place shown in Google Streetview. Monitoring carried out over the past 5 years have indicated exceedances, however once distance correction has been carried out it is predicted that there are no exceedances at the ground level façade. The Council should continue monitoring, deploying additional monitoring as close to any existing residential receptors as possible. If exceedances continue to be identified, then measures should be implemented to reduce NO<sub>2</sub> concentrations, however if no exceedances occur in future years then this AQMA can be revoked.
- **AQMA No.14 Junction of Birchwood Road and London Road** – The model has predicted concentrations within 10% of the AQS objective at one location. The model is shown to be under predicting in this area by up to 10.8%, and therefore caution should be taken. Monitoring carried out within this AQMA has reported exceedances over the past 5 years, and when distance correction has been carried out, exceedances continue to be predicted at the nearest relevant exposure. The Council should therefore retain this AQMA and consider deploying additional monitoring at relevant exposure in order to confirm these predictions. The Council should also consider updating the AQAP to include measures which focus on reducing emissions from Diesel Cars and LGVs, and to reduce congestion at this junction, in order to further reduce NO<sub>2</sub> concentrations.
- No amendments to either of the AQMA boundaries is required based on the modelling conducted, as no exceedances were identified outside of the existing boundaries.

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## 1 Introduction

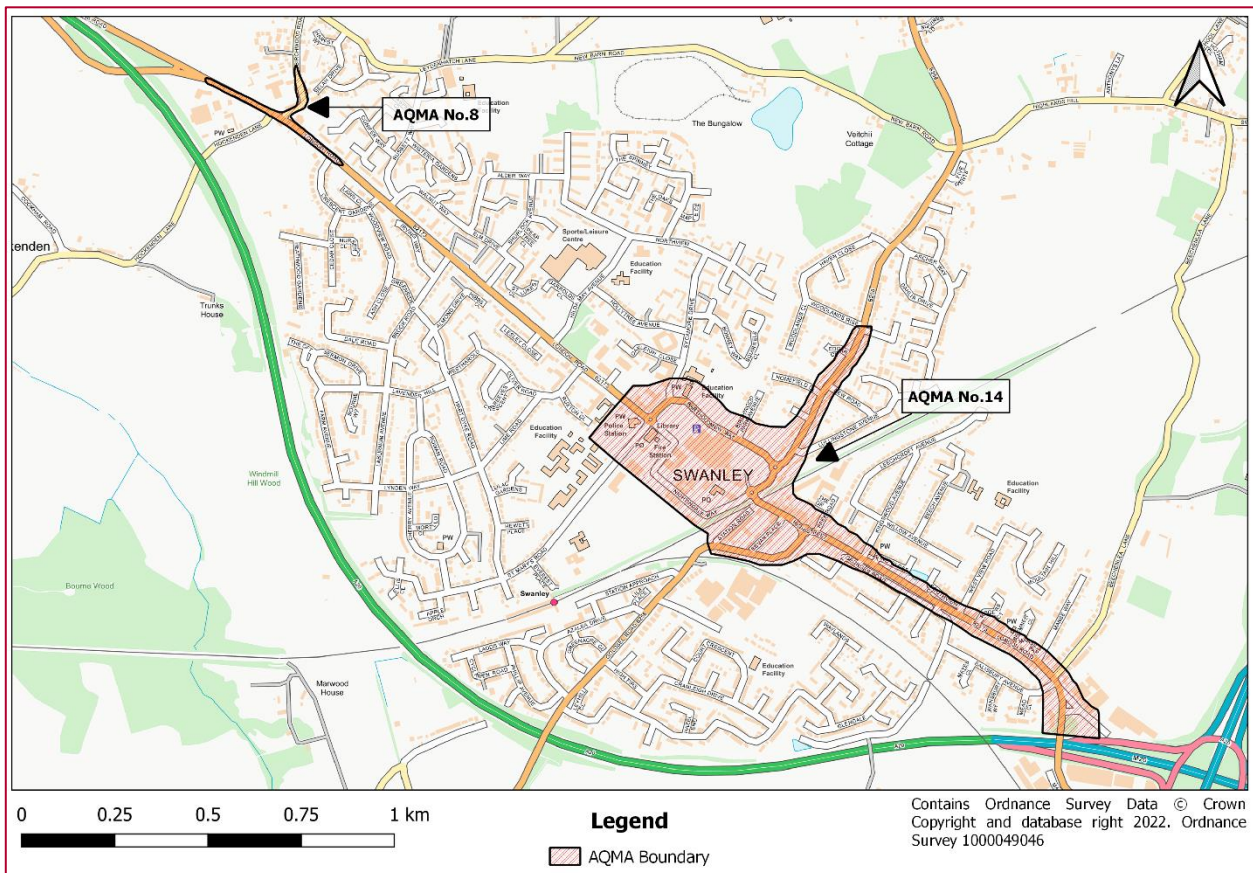
Bureau Veritas was originally commissioned by Sevenoaks District Council (the Council) to complete a detailed assessment in order to review the designation of the Council's nine Air Quality Management Areas (AQMAs) in 2019 to help inform a new Air Quality Action Plan (AQAP). At the time of the assessment, no traffic data was available for the two AQMAs located within Swanley, and the COVID-19 pandemic meant that traffic surveys carried out would not be representative of typical traffic flows. The assessment therefore focused on the seven remaining AQMAs, and the AQAP was subsequently published in February 2022.

The AQAP details a measure to complete a detailed modelling assessment of the Swanley area to quantify the local air quality, and as such, Bureau Veritas has been commissioned in 2022 to complete the assessment. This utilises traffic survey data which has been collected in 2022.

The Council currently has two declared AQMAs within the Swanley area. Details of the AQMAs included within this assessment are as follows, and maps detailing the locations of the AQMAs are presented in Figure 1.1:

- **AQMA No.8 (Swanley Town Centre)** – An area encompassing Swanley Town Centre, High Street and London Road. Declared in 2006 for exceedances of the annual mean NO<sub>2</sub> Air Quality Strategy (AQS) objective; and
- **AQMA No.14 (Junction of Birchwood and London Roads, Swanley) M25** – Declared in 2014 for exceedances of the annual mean NO<sub>2</sub> AQS objective.

Figure 1.1 – Swanley AQMAs



## 1.1 Scope of Report

The assessment seeks, with reasonable certainty, to predict the magnitude and geographical extent of any exceedances of the AQS objectives, providing the Council with updated modelling data that can be utilised for the development and/or update to AQAP measures.

The following are the main objectives of this report:

- To assess the air quality at selected locations (receptors) at the façades of locations of relevant exposure, representative of worst-case exposure within, and close to the existing AQMA boundaries, based on modelling of emissions from road traffic on the local road network;
- To determine the geographical extent of any potential exceedance of the annual mean AQS objective for NO<sub>2</sub>;
- To determine the relative contributions of various source types to the overall pollutant concentrations through the completion of a source apportionment study; and
- To put forward recommendations as to the extent of any changes to the current AQMA boundary and any changes to the declaration of the specific AQMAs.

The approach adopted in this assessment to assess the impact of road traffic emissions on air quality utilised the atmospheric dispersion model ADMS-Roads, focusing on emissions of oxides of nitrogen (NO<sub>x</sub>), which comprise of nitric oxide (NO) and NO<sub>2</sub>.

In order to provide consistency with the Council's own work on air quality, the guiding principles for air quality assessments as set out in the latest guidance and tools provided by Defra for air quality assessment (LAQM.TG(22)<sup>1</sup>) have been utilised.

---

<sup>1</sup> Local Air Quality Management Technical Guidance LAQM.TG(22), August 2022, published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland

## 2 Assessment Methodology

Atmospheric modelling to predict the pollutant concentrations emitted from road traffic sources was carried out using ADMS Roads version 5.0.0.1, developed by Cambridge Environmental Research Consultants (CERC). The approach used was based upon the following:

- Prediction of NO<sub>2</sub> concentrations to which existing receptors may be exposed to, and a comparison with the relevant AQS objectives;
- Quantification of relative NO<sub>2</sub> contribution of sources to overall NO<sub>2</sub> pollutant concentration; and
- Determination of the geographical extent of any potential exceedances in regards to the existing AQMA boundaries and proposed boundary changes stated in the previous assessment.

Pollutant concentrations have been predicted within a base year of 2019, with model inputs relevant to the assessment based upon the same year, with the exception to traffic data sourced from 2022 traffic surveys. The original assessment for Sevenoaks utilised a 2018 base year as 2019 monitoring data was not available at the time of the assessment. It has therefore been considered appropriate to use 2019 as the latest year where data is available prior to any significant impacts resulting from the COVID-19 pandemic. Motorway sections which are likely to have an influence on NO<sub>x</sub> concentrations within the Swanley area have been included, as modelled within the original Sevenoaks model (utilising 2019 DfT traffic count data)

### 2.1 Traffic Inputs

Traffic flows for the road links included within the model have been sourced from both traffic surveys conducted by Intelligent Data Collection and the DfT traffic count online resource<sup>2</sup>.

Independent traffic surveys were conducted at five locations within Swanley to determine traffic flows on the major road links to be modelled. Five automatic traffic counts were deployed, which provided average annual daily traffic (AADT) flows alongside average speeds. In addition to this, one automatic number plate recognition (ANPR) camera was deployed in order to provide a detailed breakdown of vehicle types within the area so that specific euro class splits can be utilised. The proportion of vehicle types identified at the ANPR location was used to inform the proportional vehicle split at the other ATC monitoring locations.

As the traffic surveys were carried out in 2022, a TEMPro reduction factor of 1.0216 has been used to de-growth the data to representative figures for 2019. This factor is specific to the Sevenoaks District, for the years 2019 to 2022. TEMPro (the Trip End Model Presentation Programme) is provided by the DfT and provides forecast data on trips for transport and planning purposes. Whilst it is typically used for forecasting purposes, it can also be used to backcast traffic data where required.

The DfT traffic count data source, utilised for the motorways, provides an AADT flow for the relevant road link in terms of a number of vehicle types; cars, LGVs (light goods vehicles), HGVs (heavy goods vehicles), buses and coaches, and motorcycles. The Emissions Factor Toolkit (EFT) version 9.0<sup>3</sup> default euro class splits for 2019 were utilised on the motorway road sections.

The traffic data used within the dispersion modelling are presented in Appendix A.

It is important to note that some of the traffic data used is based on estimates either from nearby links or estimated from the most recent manual counts. Traffic data, which has been estimated from manual counts that were carried out over 3 years ago, have been highlighted in Appendix A. This may lead to some uncertainty in the accuracy of the traffic data.

Traffic speeds were modelled at the relevant speed limit for each road. However, in accordance with LAQM.TG(22), where appropriate, traffic speeds have been reduced to simulate queues at junctions, traffic lights and other locations where queues or slower traffic are known to occur.

<sup>2</sup> Department for Transport, traffic count data for available road links (2020), available at <https://www.gov.uk/government/collections/road-traffic-statistics>

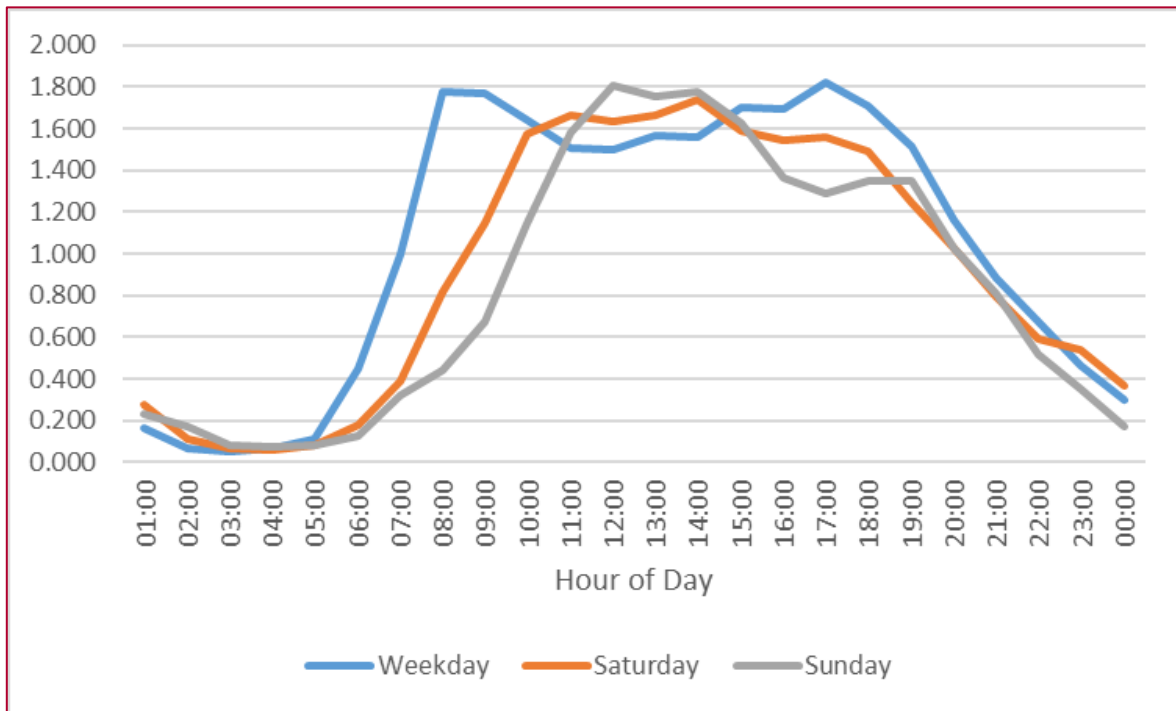
<sup>3</sup> Defra, Emissions Factors Toolkit (2019), available at <http://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html>

The EFT has been used to determine vehicle emission factors for input into the ADMS-Roads model. The emission factors are based upon the traffic data inputs used within the assessment, with total vehicle flows and proportion of vehicle types taken from the ANPR and existing DfT data. User-defined values for vehicle fleet in terms of vehicle Euro Class has been utilised for road sections within Swanley, however the pre-set national values have been utilised for the motorways in the absence of a vehicle fleet specific information for these. The decision to not use the ANPR based splits for the motorways was due to the motorways being much more likely to have a differing vehicle composition to the roads running through Swanley.

ANPR survey data has also been used to characterise the local diurnal profile of vehicle flows on the roads of interest. These have been included within the ADMS Roads model in the form of an additional model input, which has been applied to allow the temporal variation in emissions throughout the day and across the week to be reflected in the calculated emissions and therefore the predicted concentrations. The diurnal profile was only applied to the roads running through Swanley, as opposed to the motorways, as it is considered likely that the motorways would have a different profile. This however could not be determined as no independent traffic surveys were completed on the motorway sections as part of this assessment, and therefore it was assumed that emissions would remain constant throughout each day of the week.

The diurnal profile utilised is illustrated in Figure 2.1.

**Figure 2.1 – Diurnal Profile for Vehicle Emissions Used in the Modelling**



## 2.2 General Model Inputs

A site surface roughness value of 0.5m was entered into the ADMS-roads model, consistent with the suburban nature of the modelled domain. In accordance with CERC’s ADMS Roads user guide<sup>4</sup>, a minimum Monin-Obukhov Length of 30m will be used for the ADMS Roads model to reflect the urban topography of the model domain.

One year of hourly sequential meteorological data from a representative synoptic station is required by the dispersion model. For the completion of the modelling 2019 meteorological data from the Gatwick airport weather station has been utilised within in this assessment. This particular site has been chosen due to it being the nearest site with a complete data set for 2019 and is representative of an inland suburban area alongside

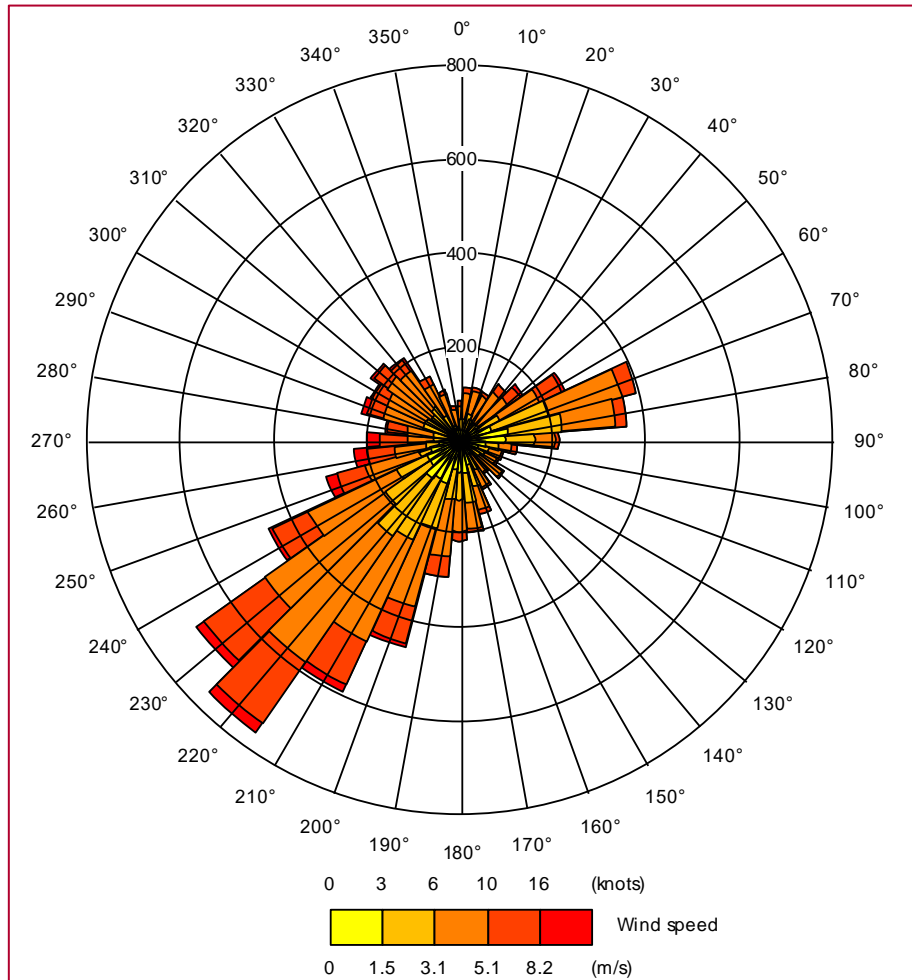
<sup>4</sup> CERC, ADMS-Roads User Guide Version 5 (2020)

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being at a similar elevation to the Sevenoaks District Council area. Gatwick airport was also utilised in the original Sevenoaks model.

A wind rose for this site for the year 2019 is presented in Figure 2.2.

**Figure 2.2 – Wind Rose for Gatwick Airport 2019 Meteorological Data**



## 2.3 Emission Sources

A total of 64 road sources were included throughout the model domain. No point sources have been included within the model under the assumption that road traffic is the primary source of the NO<sub>2</sub> emissions. The road links drawn are presented in Figure 2.3. Street canyons were also included along some stretches of road where the roads were surrounded by buildings/walls on both sides. Areas of street canyons are shown in Figure 2.4. These were identified using Google Streetview as part of the desktop study. No variation in the gradient of the road sources was included, and remained at the default 0%, assuming the area is flat.

The roads were drawn along the primary roads within the Swanley area, ensuring to include those running through the AQMAs. These were however restricted due to where available traffic data was located.



Figure 2.3 – Modelled Road Sources

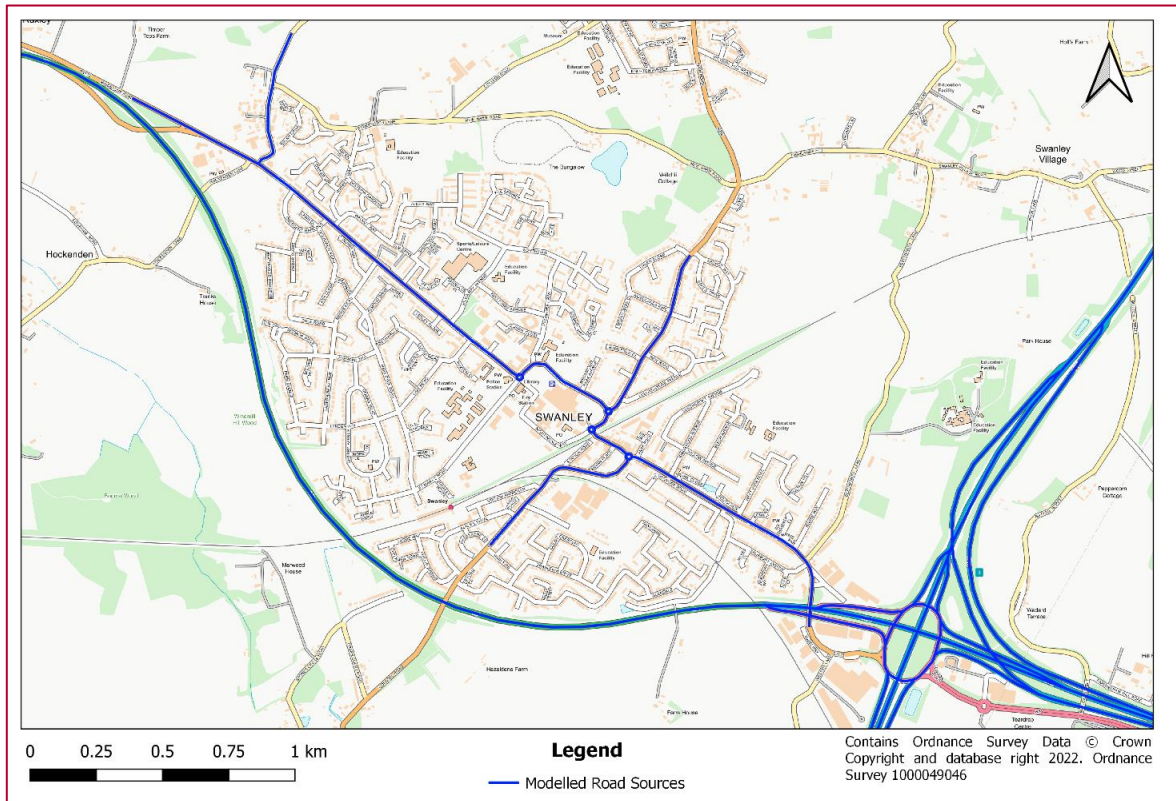
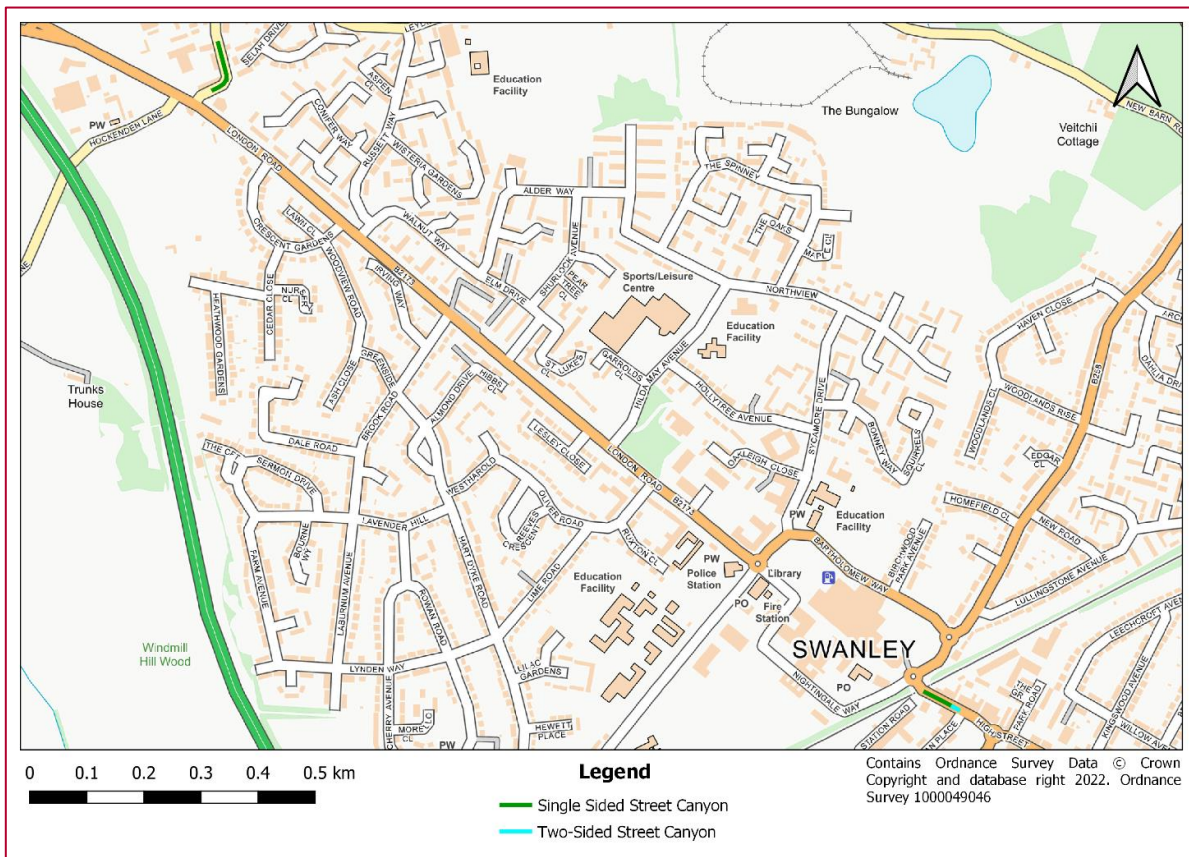


Figure 2.4 – Modelled Canyons and Canyon Height

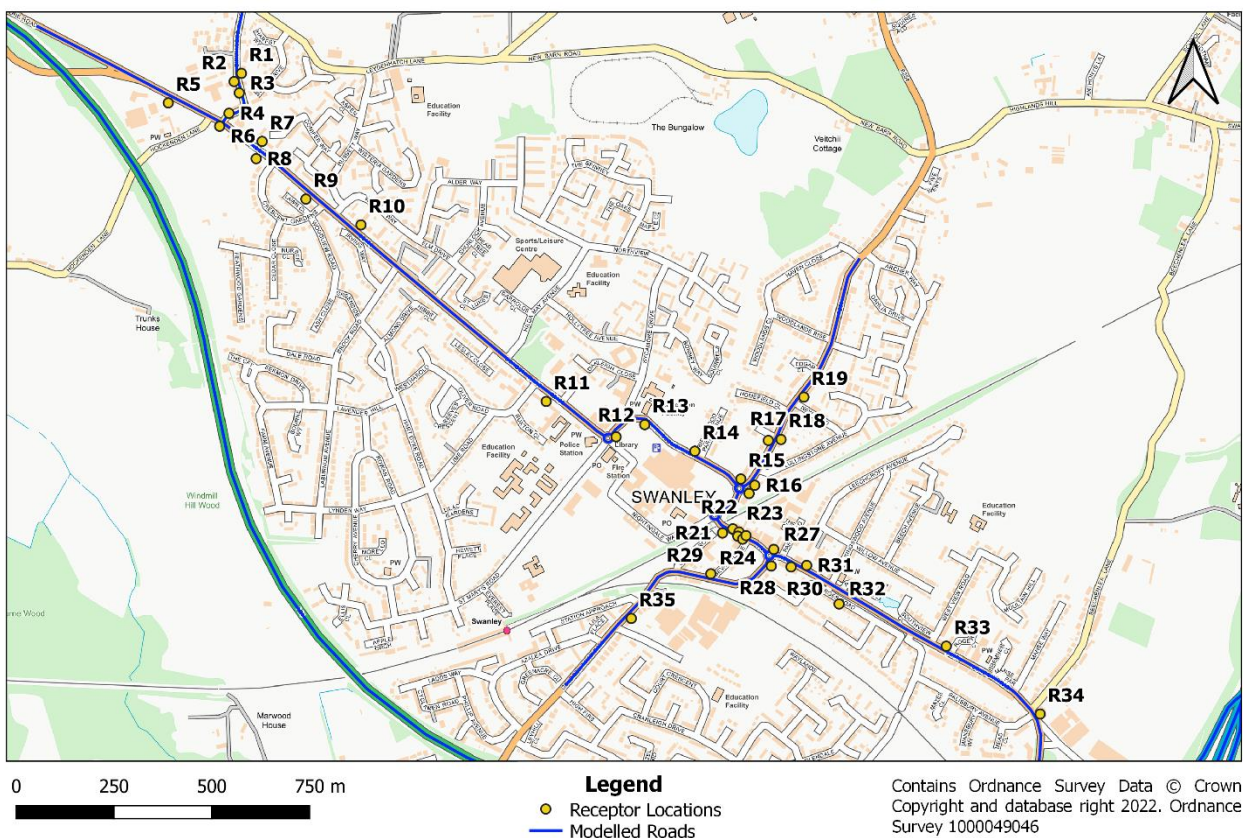


## 2.4 Sensitive Receptors

There are 35 discrete receptors included within the assessment to represent locations of relevant exposure and are displayed in Figure 2.5. The locations were identified through the completion of a desktop study, and where relevant exposure is believed to be present. In addition, concentrations were also modelled across regular gridded area's set across the AQMAs, with a spatial resolution between the receptors of approximately 12m x 12m, and 15m x 15m. Two grids were utilised to maintain a high resolution whilst remaining within ADMS-Road's capabilities. A receptor height of 1.5m was used for all gridded receptors modelled. The gridded receptor model was split into 2 separate domains to ensure a high resolution was maintained. These were supplemented with additional receptor points added close to the modelled road links, using the intelligent gridding tool in ADMS-Roads.

The majority of the discrete receptors (29) were included at a height of 1.5m to represent ground level exposure, whereas 6 receptors were included at an increased height of 4m to represent exposure at buildings with residential usage on the first storey levels.

**Figure 2.5 – Discrete Receptor Locations**



## 2.5 Model Outputs

Background pollutant values for 2019 derived from the Defra background maps database<sup>5</sup> have been used in conjunction with the concentrations predicted by the ADMS-Roads model to calculate predicted total annual mean concentrations of NO<sub>x</sub>.

To avoid duplication of the road source contribution from 'Motorway Roads' and 'Trunk A Roads' in the modelling and assessment process, these source sectors have been removed from the overall background concentrations reported both inside and outside the grid squares. The influence of 'Primary A Roads' inside

<sup>5</sup> Defra Background Maps (2020), <http://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>

the grid squares has also been removed. This has been completed using the Defra NO<sub>x</sub> Sector Removal Tool<sup>6</sup> v7.0.

Sevenoaks District Council carries out monitoring of NO<sub>2</sub> at a number of background monitoring sites using both an automatic monitor and diffusion tubes. For modelling purposes, the Defra Background maps have been used as opposed to the available background monitoring data due to there not being any representative background monitoring sites covering the modelling domain.

The background concentrations used within this assessment are presented in Appendix C.

For the prediction of annual mean NO<sub>2</sub> concentrations for the modelled scenarios, the output of the ADMS-Roads model for road NO<sub>x</sub> contributions has been converted to total NO<sub>2</sub> following the methodology in LAQM.TG(22), using the NO<sub>x</sub> to NO<sub>2</sub> conversion tool developed on behalf of Defra. This assessment has utilised the current version of the NO<sub>x</sub> to NO<sub>2</sub> conversion tool, version 7.1<sup>7</sup>. The road contribution is then added to the appropriate NO<sub>2</sub> background concentration value to obtain an overall total NO<sub>2</sub> concentration.

### 2.5.1 Verification

Verification of the model has been carried out using a number of local authority NO<sub>2</sub> passive monitoring locations, in accordance with the methodology detailed within LAQM.TG(22). A total of 7 roadside diffusion tubes are located within the Swanley area and within the existing AQMAs. Details of these are presented in Table B.1. The locations and heights of these tubes have been adjusted and validated where required via a desktop study.

Verification was carried out using all 7 sites, with the results being presented in Table B.2. It was identified that using this model wide verification factor resulted in all sites predicting with the ±25% acceptance level. There were no further adjustments which could be made to the model further improve the verification. A verification factor of 2.517 was therefore utilised.

Full details of the model verification completed can be found in Appendix B.

### 2.5.2 Source Apportionment

To help inform the development of measures as part of the action plan stage of the project, a source apportionment exercise was undertaken for the following vehicle classes.

- Petrol, Diesel and Alternative Fuelled (electric, bioethanol and liquefied petroleum gas) Cars;
- Petrol, Diesel and Alternative Fuelled LGVs;
- HGVs;
- Bus and Coaches; and
- Motorcycles.

This provides vehicle contributions of NO<sub>x</sub> as a proportion of the total NO<sub>x</sub> concentration, which will allow the Council to develop specific AQAP measures targeting a reduction in emissions from specific vehicle types. Locally defined fleet information has been used to determine local Euro Class proportions alongside national averages utilised for the motorways to derive specific emission rates. Details of the local Euro Class proportions are provided in Appendix A. The national averages for England are the pre-set values set within the latest version of the EFT.

It should be noted that emission sources of NO<sub>2</sub> are dominated by a combination of direct NO<sub>2</sub> (f-NO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>), the latter of which is chemically unstable and rapidly oxidised upon release to form

<sup>6</sup> Defra NO<sub>2</sub> Adjustment for NO<sub>x</sub> Sector Removal Tool (2019), available at <https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>

<sup>7</sup> Defra NO<sub>x</sub> to NO<sub>2</sub> Calculator (2019), available at <https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html#NOxNO2calc>

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NO<sub>2</sub>. Reducing levels of NO<sub>x</sub> emissions therefore reduces concentrations of NO<sub>2</sub>. As a consequence, the source apportionment study has considered the emissions of NO<sub>x</sub>, which are assumed to be representative of the main sources of NO<sub>2</sub>.

With regards to the discrete receptor locations, consideration has been given to the following groups of receptors located within the designated AQMAs. The source apportionment study has evaluated the following receptor combinations:

- The average NO<sub>x</sub> contributions across all modelled locations. This provides useful information when considering possible action measures to test and adopt. It will however understate road NO<sub>x</sub> concentrations in problem areas;
- The average NO<sub>x</sub> contributions across all locations with modelled NO<sub>2</sub> concentration greater than 40µg/m<sup>3</sup>. This provides an indication of source apportionment in problematic areas (i.e. only where the annual mean AQS objective is exceeded). As such, this information should be considered with more scrutiny when testing and adopting action measures; and
- The NO<sub>x</sub> contributions at the receptor with the maximum road NO<sub>x</sub> and NO<sub>2</sub> contribution. This provides a comparison to the previous two groups, with the identification of the most prominent vehicle source at receptor with the highest predicted NO<sub>2</sub> concentration.

### 3 Modelling Results

The following section provides a detailed assessment for each of the two AQMAs, comparing both the monitoring completed within the AQMAs over a five year period with the modelled concentrations of annual mean NO<sub>2</sub>. Details of each monitoring location and the monitoring results have been taken from the 2022 Annual Status Report<sup>8</sup> completed by the Council. There is a focus on 2019 monitoring data as this is comparable to the modelled results (which used 2019 as a baseline), however the recent monitoring data is also included for completeness. It should be noted that 2020 and 2021 monitoring data is not considered to be typical of normal conditions at the time of writing due to the impact of the COVID-19 pandemic on traffic levels and air quality. Whilst this provides a good indication of how much pollutant concentrations can decrease from removing road vehicles, it is not currently known whether this will be a short term effect or have longer term implications.

For each AQMA, recommendations have been put forward in terms of the current determination of the specific AQMA, in relation to potential changes to the designation or boundary. Furthermore, additional analysis of receptor locations outside the existing AQMAs has been completed to assess if there are any areas outside declared AQMAs where annual mean concentrations of NO<sub>2</sub> are predicted to be in exceedance of the annual mean objective.

In line with the standardised LAQM reporting, the tabulated results present any exceedances of the annual mean AQS objective of 40µg/m<sup>3</sup> in bold, and any predicted concentrations in exceedance of 60µg/m<sup>3</sup> have been underlined. Additionally, annual mean concentrations that are within 10% of the objective have been presented in italics in order to ensure that any uncertainty in relation to the predicted modelling concentrations is taken into consideration for any recommendations made in terms of AQMA designation, amendment or revocation.

Contour results have also been produced for each designation within the AQMAs, with concentration isopleths presented at both 40µg/m<sup>3</sup> and 36µg/m<sup>3</sup> (within 10% of the 40µg/m<sup>3</sup> objective). These have been produced from a gridded results layer covering the model domain. In addition, ADMS-roads automatically places a high number of additional receptors close to each modelled road link to increase the spatial resolution of the receptors.

In addition, the NO<sub>x</sub> source apportionment results for each AQMA which have been split across the vehicle classifications detailed in Section 2.5, are presented in both tabulated and pie charts formats. This allows a cross comparison between the main vehicular sources to be completed across each AQMA, and will aid the development of measures specific to each AQMA.

#### 3.1 AQMA No.8 Swanley Town Centre

##### 3.1.1 Council Monitoring Data

AQMA 8 is currently designated for exceedances of the annual mean NO<sub>2</sub> AQS objective. The current boundary encompasses Swanley Town Centre, High Street and London Road to the boundary of the M20. Currently there are three diffusion tubes monitoring annual mean NO<sub>2</sub> concentrations located within the current AQMA boundary. These are presented in Figure 3.1, and the monitoring results from the previous five years are shown in Figure 3.1 – AQMA No.8, Modelled Roads and Monitoring Locations

<sup>8</sup> Seveonaks District Council (2019), 2019 Air Quality Annual Status Report

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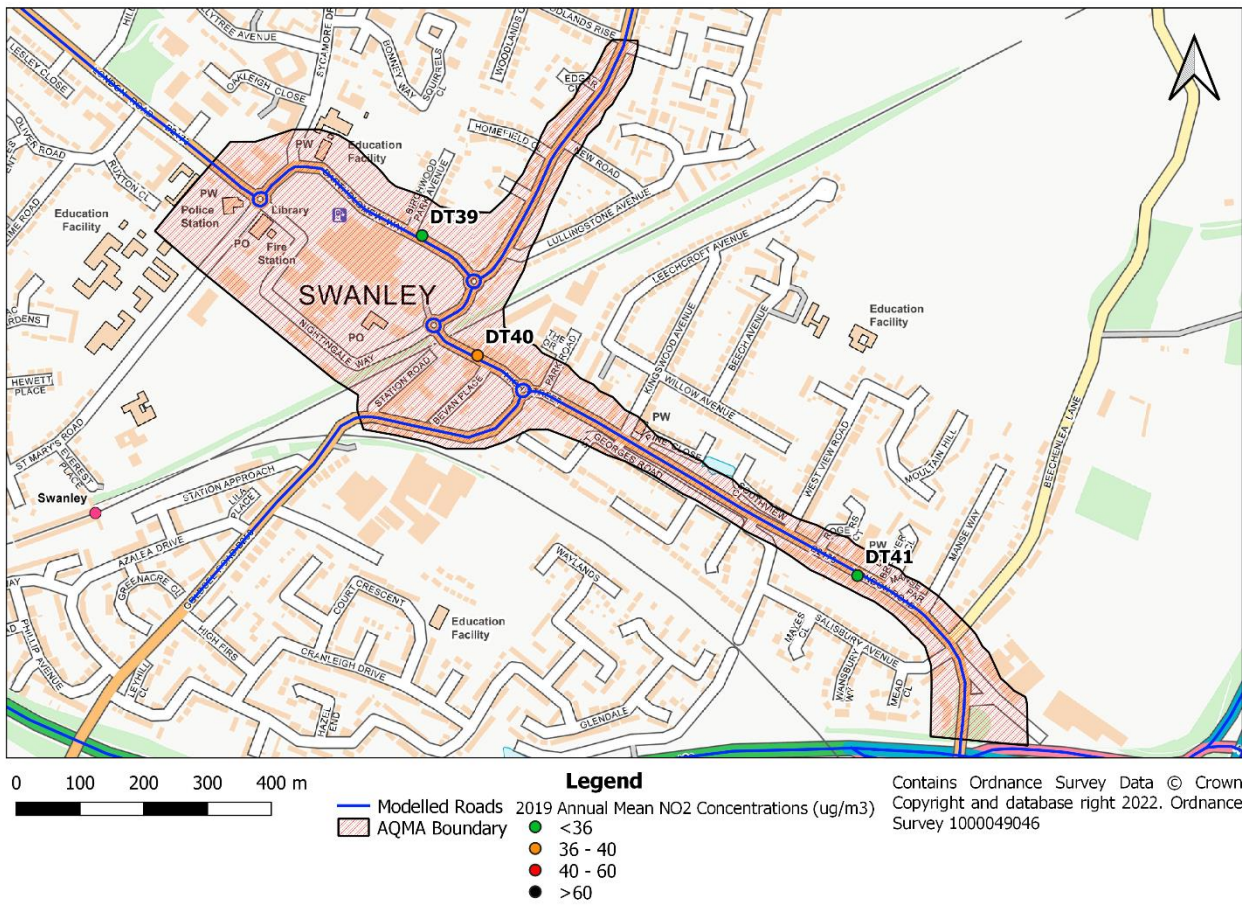


Table 3.1.

Exceedances of the annual mean NO<sub>2</sub> objective have been reported at both DT40 and DT41 in the past five years (2017 and 2018). DT40 has consistently reported the highest concentration out of all three monitoring locations for the past five years. DT40 continued to report a concentration within 10% of the AQS objective in 2019. This is likely due to being located within a small street canyon and between two junctions.

Following the application of distance correction to predict annual mean NO<sub>2</sub> concentrations at the closest point of relevant exposure for sites that are exceeding or within 10% of the AQS objective in 2019, as detailed within Table 3.2, the predicted concentration from DT40 is reported to be below the annual mean NO<sub>2</sub> objective.

Figure 3.1 – AQMA No.8, Modelled Roads and Monitoring Locations

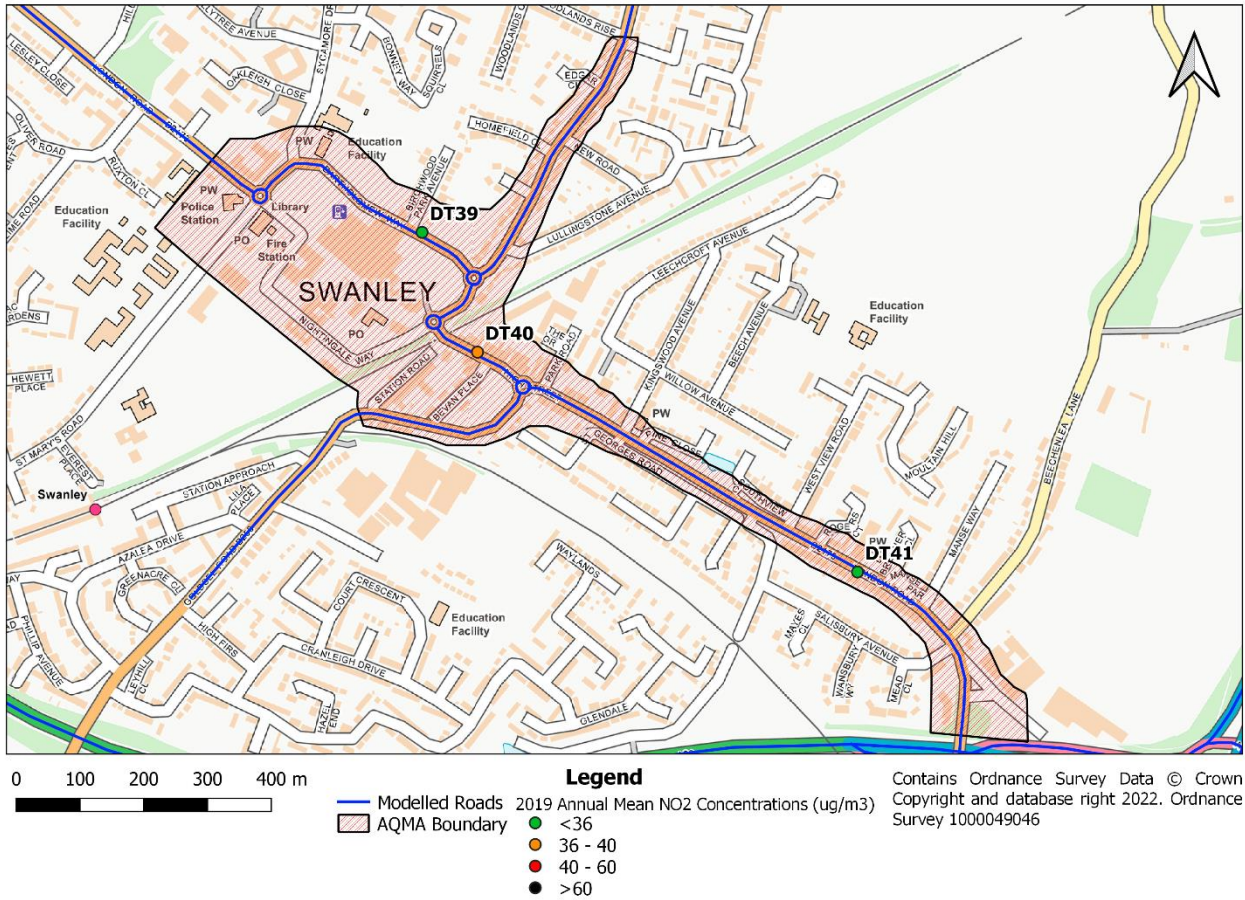


Table 3.1 – Current NO<sub>2</sub> Monitoring Within AQMA No.8

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Relevant Exposure (m)	Height (m)	Annual Mean NO <sub>2</sub> Concentration ( $\mu\text{g}/\text{m}^3$ )				
						2017	2018	2019	2020	2021
DT39	R	551492	168695	13.0	2.5	34.5	36.4	34.8	28.1	29.4
DT40	R	551579	168507	2.0	2.5	<b>40.9</b>	<b>45.6</b>	37.5	28.4	34.1
DT41	R	552175	168162	6.0	2.5	<b>40.1</b>	38.6	32.6	27.2	29.5

In *italics*, concentration is within 10% of the annual mean NO<sub>2</sub> AQS objective (i.e. 36 – 40 $\mu\text{g}/\text{m}^3$ )  
 In **bold**, exceedance of the annual mean NO<sub>2</sub> AQS objective of 40 $\mu\text{g}/\text{m}^3$ .  
 When underlined, NO<sub>2</sub> annual mean exceeds 60 $\mu\text{g}/\text{m}^3$ , indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective  
 R= Roadside

Table 3.2 – 2019 NO<sub>2</sub> Monitoring Within AQMA No.8, Distance Corrected

Site	Site Type	Distance to Kerbside (m)	Distance from Kerbside to Relevant Exposure (m)	Monitored Concentration ( $\mu\text{g}/\text{m}^3$ )	Distance Corrected Concentration ( $\mu\text{g}/\text{m}^3$ )
DT40	R	0.5	2.5	37.5	31.4

In *italics*, concentration is within 10% of the annual mean NO<sub>2</sub> AQS objective (i.e. 36 – 40 $\mu\text{g}/\text{m}^3$ )  
 In **bold**, exceedance of the annual mean NO<sub>2</sub> AQS objective of 40 $\mu\text{g}/\text{m}^3$ .  
 When underlined, NO<sub>2</sub> annual mean exceeds 60 $\mu\text{g}/\text{m}^3$ , indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective  
 R= Roadside

## 3.1.2 Modelled Receptors, Annual Mean NO<sub>2</sub>

Table 3.3 provides the modelled annual mean NO<sub>2</sub> concentrations predicted at existing residential receptor locations in 2019. There are 23 discrete receptor locations positioned within the boundary of AQMA No.8, with 1 receptor located at a specific sensitive receptor (Montessori Group Preschool). Two additional receptors located in close proximity to the AQMA were also modelled. Two receptors located within the AQMA, R25 and R26, have predicted exceedances of the annual mean NO<sub>2</sub> objective, with concentrations predicted to be 56.0µg/m<sup>3</sup> and 49.8µg/m<sup>3</sup> respectively. All other receptor locations have a concentration predicted to be below 10% of the AQS objective.

Figure 3.2 presents the modelled receptor locations alongside their predicted annual mean NO<sub>2</sub> concentrations. From this, it can be seen that the exceedances being predicted at R25 and R26 are located along the High Street, just westwards of the junction to Bevan Place. Both of these receptors are positioned at a height of 4m as it is believed there are residential receptors above the commercial properties. Additionally, a small double-sided street canyon has been modelled here hence why concentrations are lower elsewhere along this stretch. The nearest diffusion tube monitoring location to these receptors is DT40, which reported an annual mean NO<sub>2</sub> concentration in 2019 of 37.5µg/m<sup>3</sup>. The model is over predicting concentrations at this location by 12.9%, therefore indicating that modelled concentrations are likely to also be slightly over predicted in this location and should be considered as a conservative prediction. Despite this over prediction, an exceedance would still be considered at R25 and R26 even if the model was not over predicting by 12.9%.

The additional sensitive receptor located at the Montessori Group Preschool, R20, has a predicted annual mean NO<sub>2</sub> concentration of 27.5µg/m<sup>3</sup> in 2019, therefore is predicted to be below the annual mean NO<sub>2</sub> objective.

From the annual mean NO<sub>2</sub> concentration contour plots presented in Figure 3.3, it can be seen that the extent of the predicted exceedances of the annual mean objective are focused around the roundabout junctions within the AQMA, and are retained within the AQMA boundary. The contour lines follow the geometry of the road, and with the exception of the section of the High Street around R25 and 26, the exceedance limit does not come into contact with any other residential areas located within the AQMA. Additionally, whilst there are contours for concentrations greater than 60µg/m<sup>3</sup> (which would indicate a potential exceedance of the 1-hour NO<sub>2</sub> AQS objective, as per LAQM.TG(22)), none of these are in areas where members of public would be expected to spend 1-hour or more.

**Table 3.3 – AQMA No.8, Summary of Modelled Receptor Results (NO<sub>2</sub>)**

Receptor ID	OS Grid X	OS Grid Y	Height (m)	In AQMA?	AQS objective (µg/m <sup>3</sup> )	2019 Annual Mean NO <sub>2</sub> (µg/m <sup>3</sup> )	% of AQS objective
R11	551079	168846	1.5	N	40	20.1	50
R12	551258	168755	1.5	Y	40	32.8	82
R13	551331	168787	1.5	Y	40	25.1	63
R14	551459	168719	1.5	Y	40	28.8	72
R15	551577	168648	1.5	Y	40	35.2	88
R16	551612	168631	1.5	Y	40	26.2	65
R17	551647	168746	1.5	Y	40	22.3	56
R18	551680	168749	1.5	Y	40	22.3	56
R19	551738	168857	1.5	Y	40	22.1	55
R20	551598	168610	1.5	Y	40	27.5	69
R21	551530	168510	1.5	Y	40	25.2	63
R22	551556	168520	4	Y	40	34.3	86
R23	551572	168512	4	Y	40	24.4	61
R24	551569	168501	4	Y	40	35.7	89
R25	551581	168494	4	Y	40	<b>56.0</b>	140
R26	551590	168503	4	Y	40	<b>49.8</b>	125
R27	551661	168468	4	Y	40	30.1	75
R28	551655	168425	1.5	Y	40	27.3	68



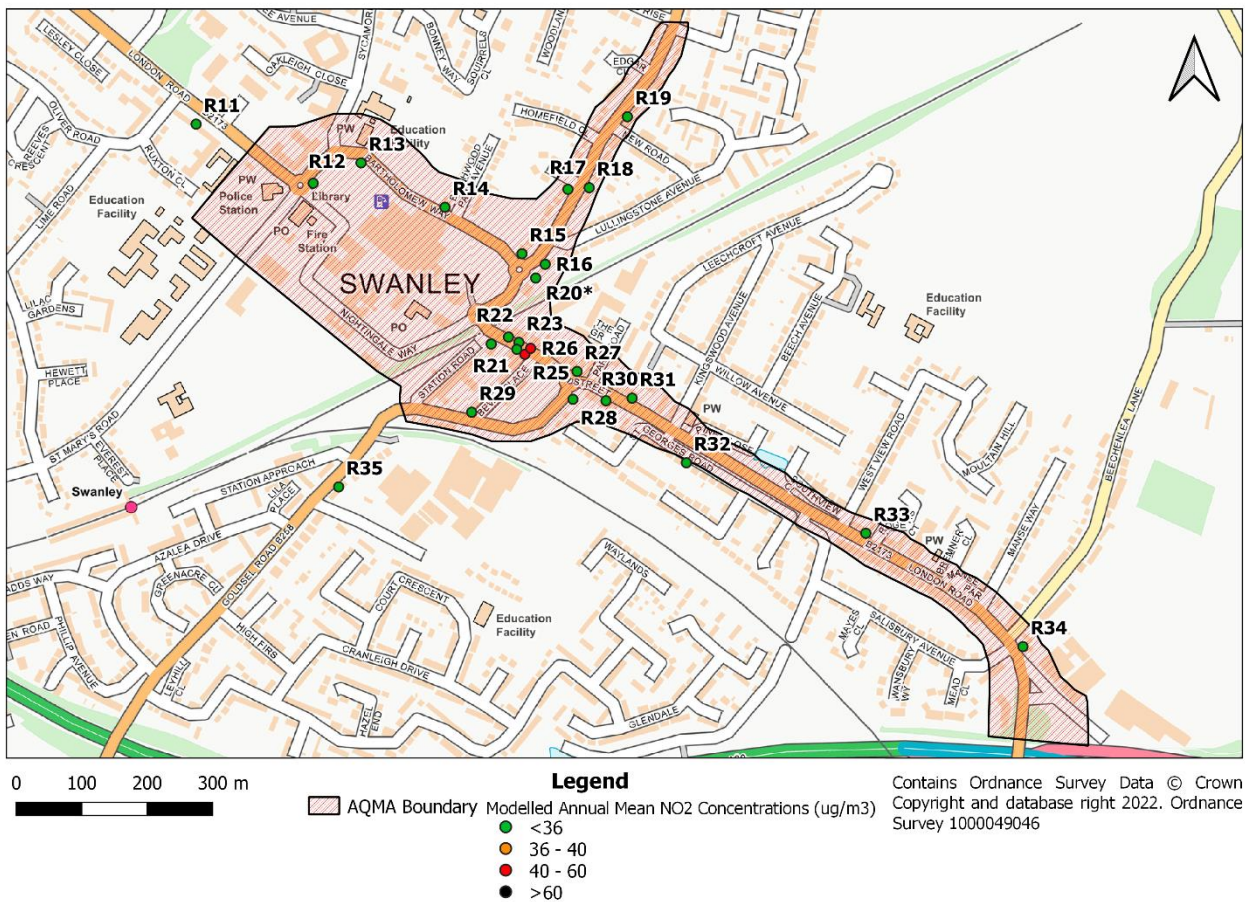
Receptor ID	OS Grid X	OS Grid Y	Height (m)	In AQMA?	AQS objective (µg/m³)	2019 Annual Mean NO <sub>2</sub> (µg/m³)	% of AQS objective
R29	551500	168405	1.5	Y	40	24.3	61
R30	551705	168423	1.5	Y	40	27.0	67
R31	551745	168427	1.5	Y	40	31.1	78
R32	551828	168328	1.5	N	40	22.0	55
R33	552102	168220	1.5	Y	40	29.6	74
R34	552342	168047	1.5	Y	40	32.0	80
R35	551297	168291	1.5	N	40	22.3	56

In *italics*, concentration is within 10% of the annual mean NO<sub>2</sub> AQS objective (i.e. 36 – 40µg/m<sup>3</sup>)

In **bold**, exceedance of the annual mean NO<sub>2</sub> AQS objective of 40µg/m<sup>3</sup>.

When underlined, NO<sub>2</sub> annual mean exceeds 60µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective

Figure 3.2 – AQMA No.8, Modelled Receptor NO<sub>2</sub> Concentrations

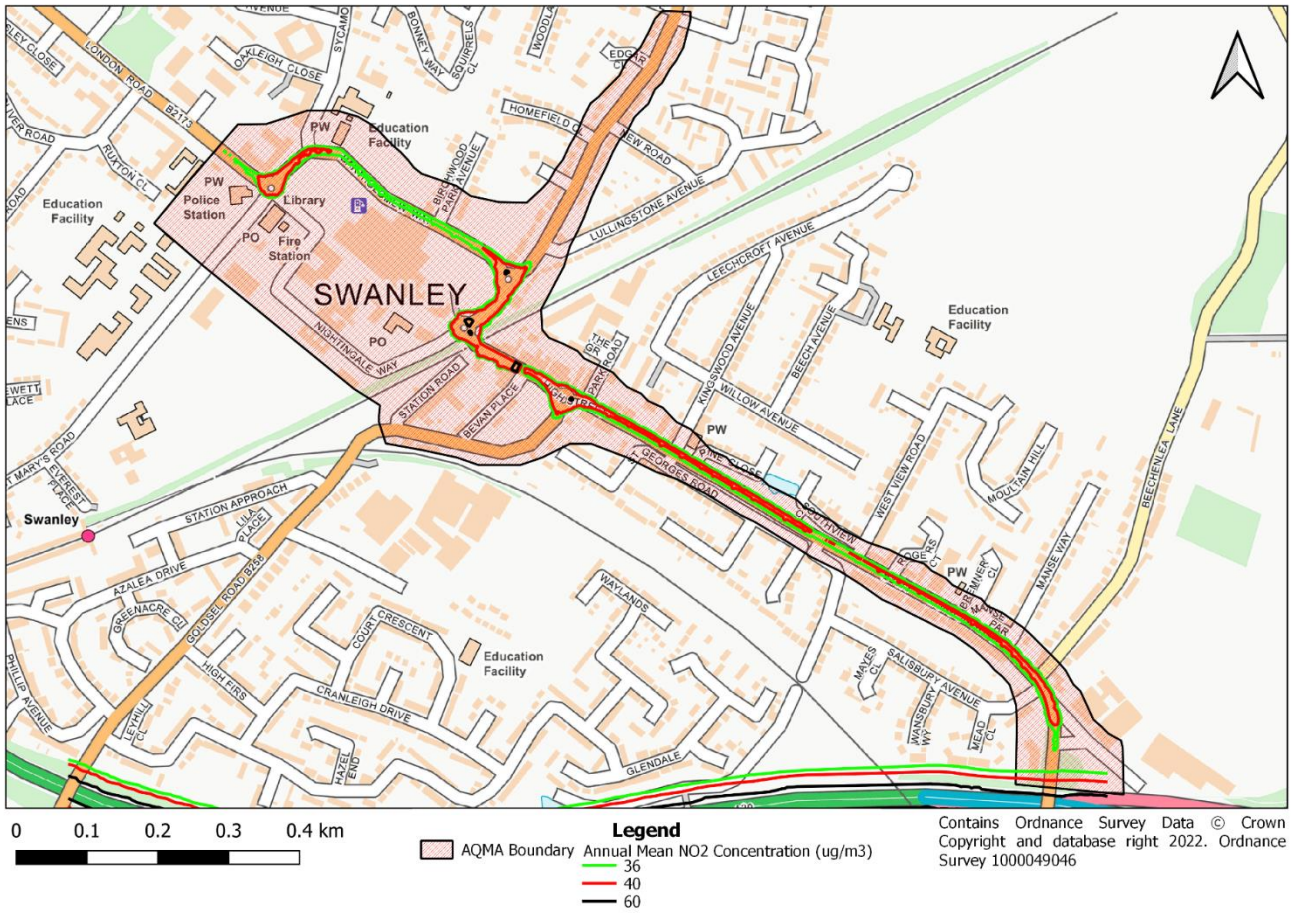


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Detailed Assessment of Swanley AQMAs



Figure 3.3 – AQMA No.8, Modelled NO<sub>2</sub> Concentration Isoleths





### 3.1.3 AQMA No.8 Source Apportionment

The source apportionment completed for the modelled receptors within the boundary of AQMA No.8 incorporates the 23 receptors as detailed within Table 3.3 above. Apportionment for NO<sub>x</sub> concentrations have been completed for the three separate groups in terms of the receptors as detailed in Section 2.5, with the results presented in Table 3.4 and Figure 3.4.

When considering the average NO<sub>x</sub> concentration across all modelled receptors, road traffic accounts for 33.5µg/m<sup>3</sup> (65.0%) of total NO<sub>x</sub> concentration (51.5µg/m<sup>3</sup>). Of vehicle types contributing to the 51.5µg/m<sup>3</sup> total NO<sub>x</sub> concentration, Diesel Cars account for the greatest contribution (27.5%) of any of the vehicle types, followed by Diesel LGVs (18.5%), HGVs (13.1%) and Petrol Cars (5.0%). The remaining vehicle source groups (Petrol LGVs, Alternative Fuel Cars and LGVs, Bus and Coach, and Motorcycles) contribute less than 0.7% each.

Averaged across the receptors where an exceeding annual mean NO<sub>2</sub> concentration is predicted (R25 and R26), road traffic accounts for 86.0µg/m<sup>3</sup> (82.5%) of the total NO<sub>x</sub> concentration (104.3µg/m<sup>3</sup>). Of vehicle types contributing to the total NO<sub>x</sub> concentration, a similar distribution is observed, whereby Diesel Cars account for the greatest contribution (34.0%), followed by Diesel LGVs (21.2%), HGVs (19.2%) and Petrol Cars (6.7%), with the remaining vehicle source groups contributing less than 1.1% each.

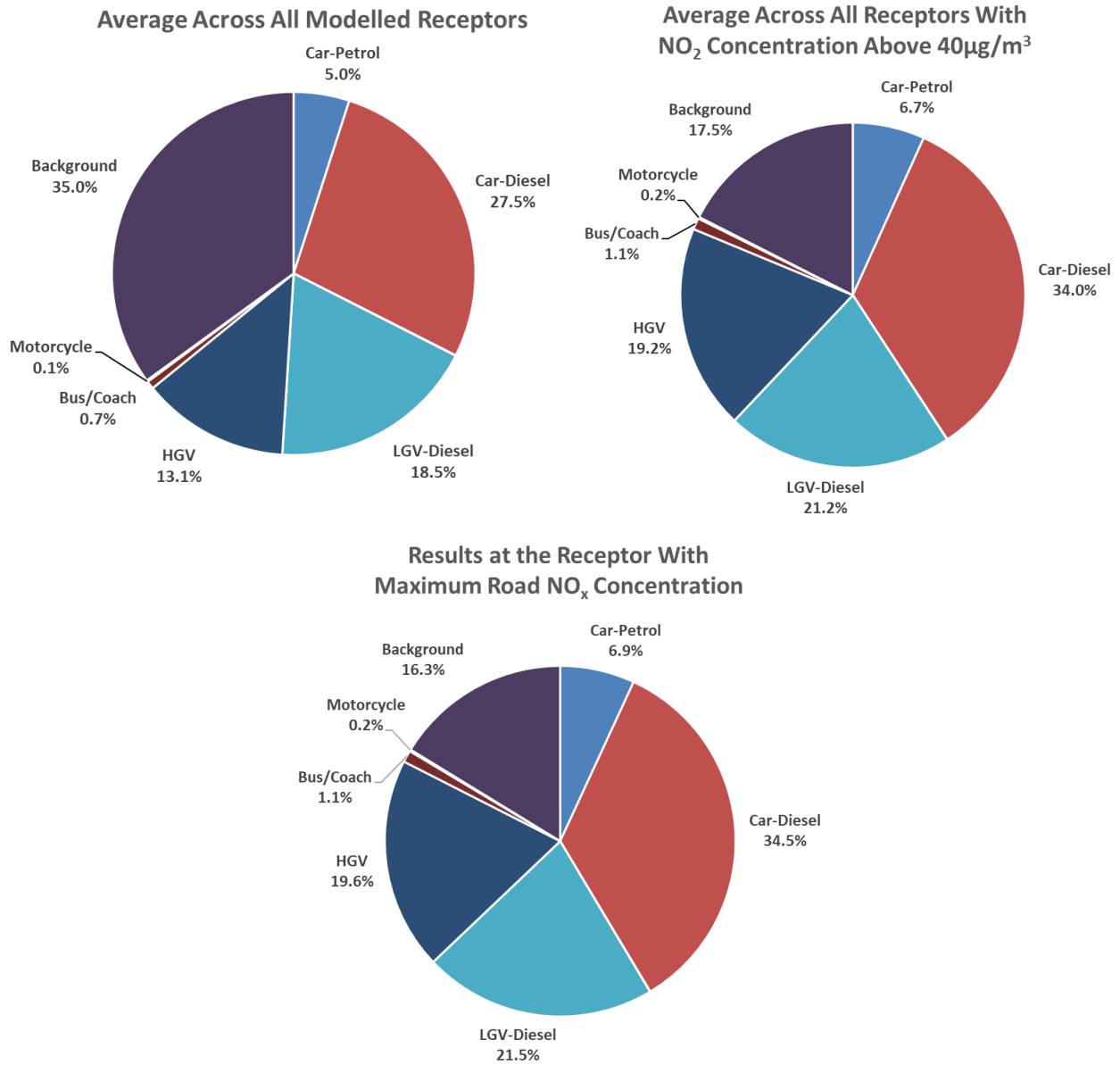
The receptor with the maximum road NO<sub>x</sub> concentration is receptor R25, whereby the total road NO<sub>x</sub> was predicted to be 94.1µg/m<sup>3</sup>. At this receptor, road traffic accounts for 83.7% of total NO<sub>x</sub> concentration (112.4µg/m<sup>3</sup>). Of the total NO<sub>x</sub> concentration, the separate vehicle apportionment remains similar to the previous assessments but with a slightly increased apportionment to Diesel Cars, Diesel LGVs and HGVs, and a slightly decreased apportionment Petrol Cars. The remaining vehicle source groups contributing less than 1.1% each.

**Table 3.4 – NO<sub>x</sub> Source Apportionment Results: AQMA No.8**

Results	All Vehicles	Car			LGV			HGV	Bus and Coach	Motorcycle	Background
		Petrol	Diesel	EV/LPG	Petrol	Diesel	EV/LPG				
<b>Average across all modelled receptors</b>											
NO <sub>x</sub> Concentration (µg/m <sup>3</sup> )	33.5	2.6	14.2	0.0	0.0	9.5	0.0	6.8	0.4	0.1	18.1
Percentage of Total NO <sub>x</sub>	65.0%	5.0%	27.5%	0.0%	0.0%	18.5%	0.0%	13.1%	0.7%	0.1%	35.0%
Percentage Contribution to Road NO <sub>x</sub>	100.0%	7.6%	42.3%	0.0%	0.0%	28.5%	0.0%	20.2%	1.1%	0.2%	-
<b>Average Across All Receptors with NO<sub>2</sub> Concentration exceeding the AQS annual mean objective</b>											
NO <sub>x</sub> Concentration (µg/m <sup>3</sup> )	86.0	7.0	35.5	0.0	0.0	22.2	0.0	20.0	1.1	0.2	18.3
Percentage of Total NO <sub>x</sub>	82.5%	6.7%	34.0%	0.0%	0.0%	21.2%	0.0%	19.2%	1.1%	0.2%	17.5%
Percentage Contribution to Road NO <sub>x</sub>	100.0%	8.2%	41.2%	0.0%	0.0%	25.8%	0.0%	23.3%	1.3%	0.2%	-
<b>At Receptor with Maximum Road NO<sub>x</sub> Concentration (R25)</b>											
NO <sub>x</sub> Concentration (µg/m <sup>3</sup> )	94.1	7.7	38.8	0.0	0.0	24.1	0.0	22.0	1.2	0.2	18.3
Percentage of Total NO <sub>x</sub>	83.7%	6.9%	34.5%	0.0%	0.0%	21.5%	0.0%	19.6%	1.1%	0.2%	16.3%
Percentage Contribution to Road NO <sub>x</sub>	100.0%	8.2%	41.2%	0.0%	0.0%	25.6%	0.0%	23.4%	1.3%	0.2%	-

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Figure 3.4 – NO<sub>x</sub> Source Apportionment Results: AQMA No.8



### 3.2 AQMA No.14 Junction of Birchwood and London Roads

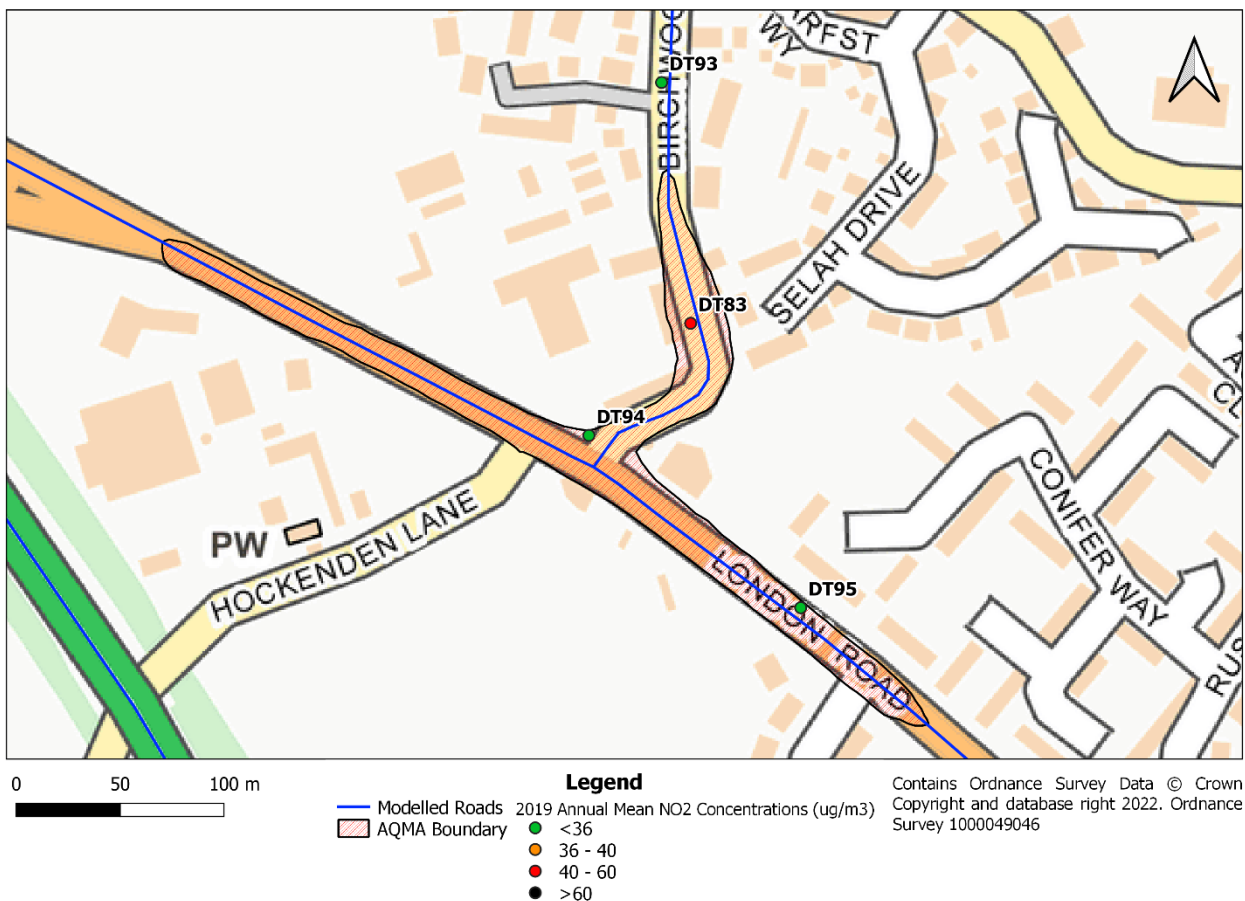
#### 3.2.1 Council Monitoring Data

AQMA No.14 is currently designated for exceedances of the annual mean NO<sub>2</sub> AQS objective with the current boundary covering the junction of Birchwood Road and London Road located within Sevenoaks. Currently there are three diffusion tubes monitoring annual mean NO<sub>2</sub> concentrations located within the current AQMA boundary, with one additional diffusion tube (DT93) located just northwards along Birchwood Road outside the AQMA boundary. The current diffusion tube monitoring sites located within the AQMA are presented in Figure 3.5, and results for the previous five years are detailed in Table 3.5.

DT83, DT94 and DT95 are all located within the boundary of AQMA No.8 and it can be seen that there have been reported exceedances at DT83 in 2017, 2018 and 2019. No exceedances have been reported at any of the other diffusion tube locations, including DT93, nor are any of the concentrations within 10% of the AQS objective.

Following the application of distance correction to predict annual mean NO<sub>2</sub> concentrations at the closest point of relevant exposure at sites which are either exceeding or within 10% of the AQS objective, as detailed within Table 3.6, DT83 shows a predicted concentration to still be in exceedance of the annual mean NO<sub>2</sub> objective in 2019 at the nearest relevant exposure.

Figure 3.5 – AQMA No.14, Modelled Roads and Monitoring Locations



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**Table 3.5 – Current NO<sub>2</sub> Monitoring Within, or in Close Proximity to AQMA No.14**

Site	Site Type	OS Grid Ref X	OS Grid Ref Y	Distance to Relevant Exposure (m)	Height (m)	Annual Mean NO <sub>2</sub> Concentration (µg/m <sup>3</sup> )				
						2017	2018	2019	2020	2021
DT83	R	550297	169682	0.5	2.5	<b>49.8</b>	<b>46.7</b>	<b>42.4</b>	33.3	33.1
DT93	R	550283	169743	10.0	2.5	27.2	28.8	25.9	19.5	20.2
DT94	R	550283	169743	10.0	2.0	32.2	33.8	28.6	22.8	22.7
DT95	R	550258	169575	20.0	2.5	33.6	33.0	30.2	25.0	25.3

In **bold**, exceedance of the annual mean NO<sub>2</sub> AQS objective of 40µg/m<sup>3</sup>.  
When underlined, NO<sub>2</sub> annual mean exceeds 60µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective  
R= Roadside

**Table 3.6 – 2019 NO<sub>2</sub> Monitoring Within AQMA No.14, Distance Corrected**

Site	Site Type	Distance to Kerbside (m)	Distance from Kerbside to Relevant Exposure (m)	Monitored Concentration 2018 (µg/m <sup>3</sup> )	Distance Corrected Concentration (µg/m <sup>3</sup> )
<b>DT83</b>	R	1.0	1.5	<b>42.4</b>	<b>40.2</b>

In **bold**, exceedance of the annual mean NO<sub>2</sub> AQS objective of 40µg/m<sup>3</sup>.  
When underlined, NO<sub>2</sub> annual mean exceeds 60µg/m<sup>3</sup>, indicating a potential exceedance of the NO<sub>2</sub> 1-hour mean objective  
R= Roadside

### 3.2.2 Modelled Receptors, Annual Mean NO<sub>2</sub>

Table 3.7 provides the modelled annual mean NO<sub>2</sub> concentrations predicted at existing residential receptor locations in 2019. 4 discrete receptor locations are positioned within the AQMA boundary or in very close proximity to AQMA No.14 (i.e. on the edge of the AQMA boundary), with a further 6 being located nearby. None of these receptor locations have predicted and exceedance of the annual mean NO<sub>2</sub> objective.

Figure 3.6 presents the modelled receptor locations alongside their predicted annual mean NO<sub>2</sub> concentrations. The maximum predicted NO<sub>2</sub> concentration is 36.8µg/m<sup>3</sup> at R3, which is located at the residential property on Birchwood Road nearest to monitoring location DT83. The model is shown to be underpredicting NO<sub>2</sub> concentrations at DT83 by up to 10.8%. Therefore a degree of caution should be taken into account when considering the model outputs in this location, as the true concentration could be slightly higher.

From the annual mean NO<sub>2</sub> concentration contour plots presented in Figure 3.7, it can be seen that the extent of the predicted exceedances of the annual mean objective follow the geometry of the road and are located within the existing AQMA boundary. The exceedance limit is not believed to come into contact with any residential properties surrounding the junction.

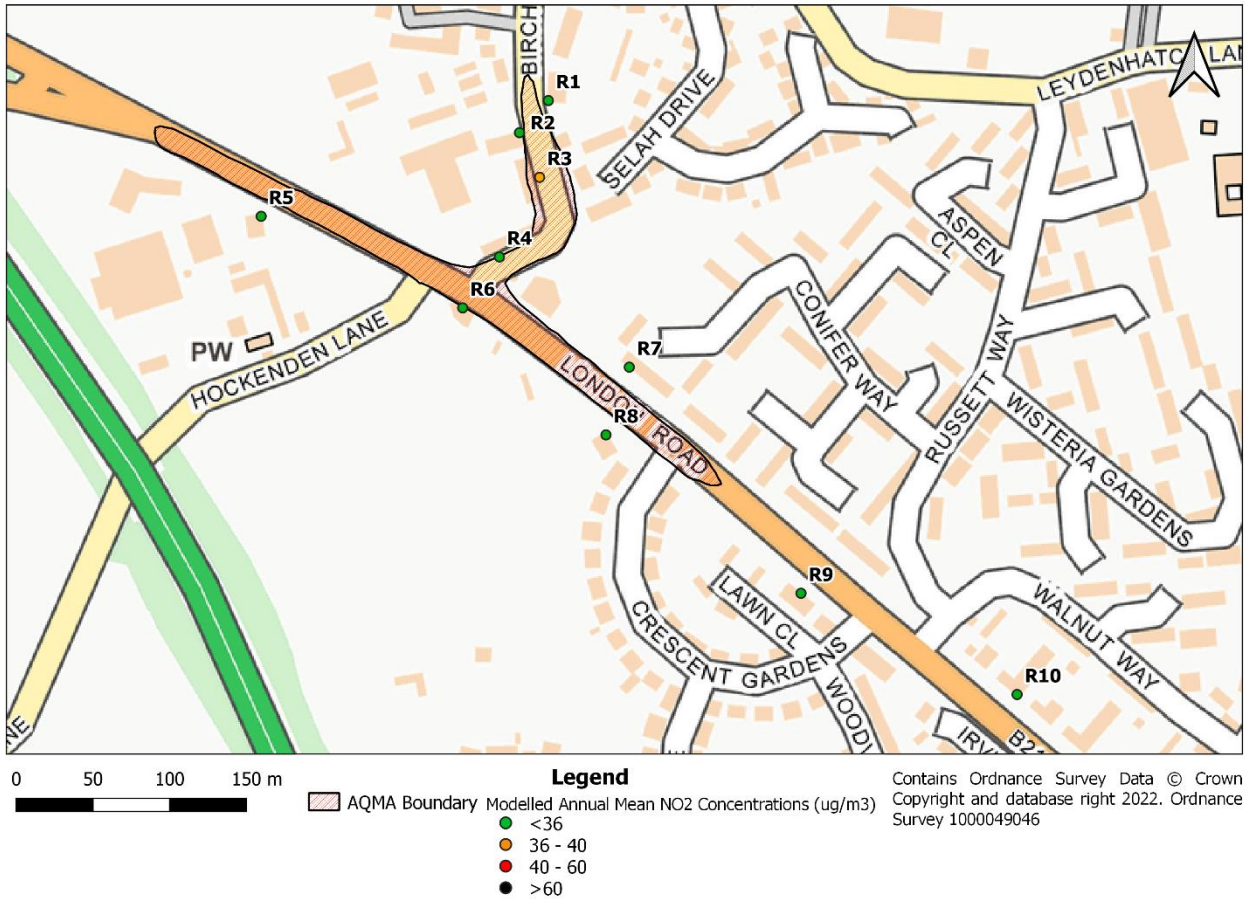
**Table 3.7 – AQMA No.14, Summary of Modelled Receptor Results (NO<sub>2</sub>)**

Receptor ID	OS Grid X	OS Grid Y	Height (m)	Inside AQMA?	AQS objective (µg/m <sup>3</sup> )	2019 Annual Mean NO <sub>2</sub> (µg/m <sup>3</sup> )	% of AQS objective
R1	550300	169684	1.5	N	40	25.5	64
R2	550281	169663	1.5	Y	40	23.1	58
R3	550294	169634	1.5	Y	40	36.8	92
R4	550268	169582	1.5	Y	40	35.2	88
R5	550113	169607	1.5	N	40	24.0	60
R6	550244	169549	1.5	Y	40	28.5	71
R7	550353	169510	1.5	N	40	22.9	57
R8	550338	169466	1.5	N	40	21.1	53
R9	550465	169363	1.5	N	40	20.4	51

Receptor ID	OS Grid X	OS Grid Y	Height (m)	Inside AQMA?	AQS objective ( $\mu\text{g}/\text{m}^3$ )	2019 Annual Mean $\text{NO}_2$ ( $\mu\text{g}/\text{m}^3$ )	% of AQS objective
R10	550605	169297	1.5	N	40	21.6	54

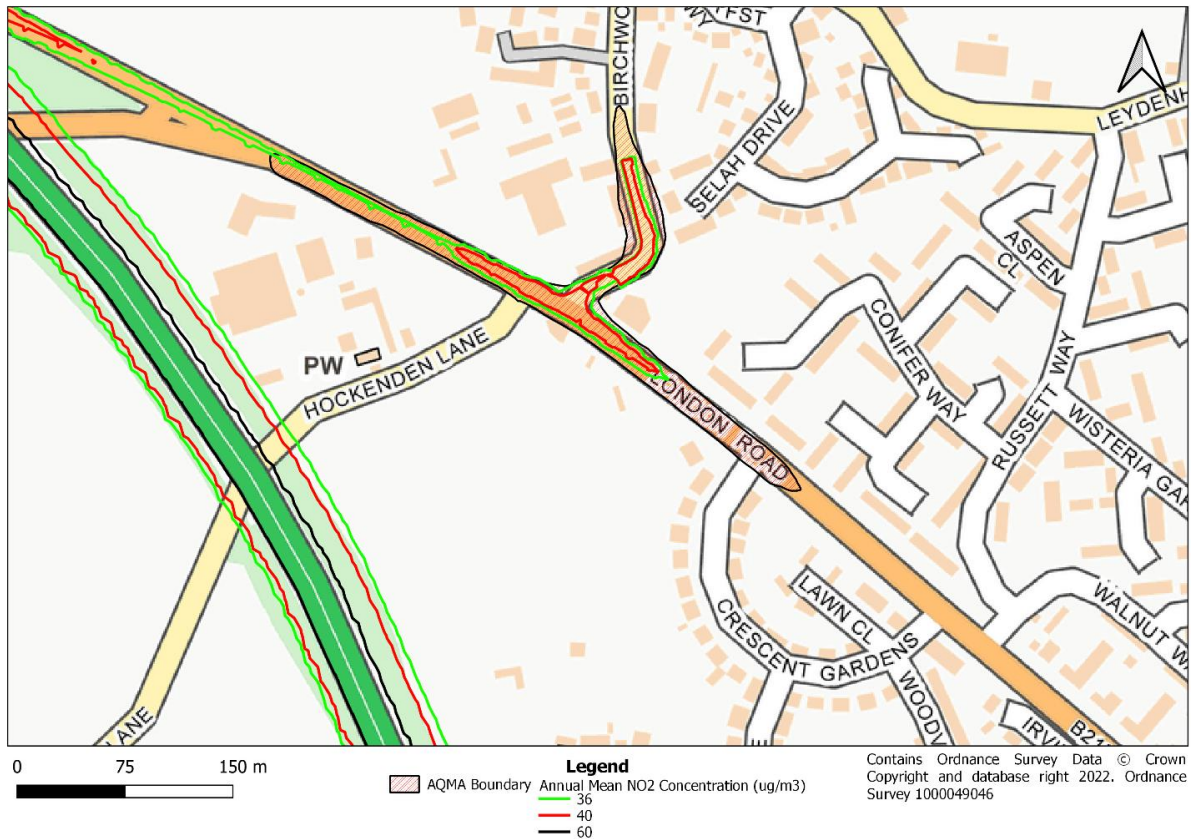
In *italics*, concentration is within 10% of the annual mean  $\text{NO}_2$  AQS objective (i.e. 36 –  $40\mu\text{g}/\text{m}^3$ )  
 In **bold**, exceedance of the annual mean  $\text{NO}_2$  AQS objective of  $40\mu\text{g}/\text{m}^3$ .  
 When underlined,  $\text{NO}_2$  annual mean exceeds  $60\mu\text{g}/\text{m}^3$ , indicating a potential exceedance of the  $\text{NO}_2$  1-hour mean objective

Figure 3.6 – AQMA No.14, Modelled Receptor Locations



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Figure 3.7 – AQMA No.14 Modelled NO<sub>2</sub> Concentration Isoleths



### 3.2.3 AQMA No.2 Source Apportionment

The source apportionment completed for the modelled receptors within the boundary of AQMA No.14 incorporates the 4 receptors as detailed within Table 3.7 above. Apportionment for NO<sub>x</sub> concentrations have been completed for two separate groups in terms of the receptors as detailed in Section 2.5, excluding the average across all receptors with NO<sub>2</sub> concentrations exceeding the AQS annual mean objective as no exceedance was reported. The results are presented in Table 3.8 and





Figure 3.8.

When considering the average NO<sub>x</sub> concentration across all modelled receptors, road traffic accounts for 35.7µg/m<sup>3</sup> (67.1%) of total NO<sub>x</sub> concentration (53.1µg/m<sup>3</sup>). Of the total NO<sub>x</sub> concentration, Diesel Cars account for the greatest contribution (28.8%) of any of the vehicle types, followed by Diesel LGVs (19.5%), HGVs (13.1%) and Petrol Cars (4.8%). The remaining vehicle source groups (Petrol LGVs, Alternative Fuel Cars and LGVs, Bus and Coach, and Motorcycles) contribute less than 0.7% each.

The receptor with the maximum road NO<sub>x</sub> concentration is receptor R3, whereby the total road NO<sub>x</sub> was predicted to be 48.1µg/m<sup>3</sup>. At this receptor, road traffic accounts for 73.3% of total NO<sub>x</sub> concentration (65.6µg/m<sup>3</sup>). Of the total NO<sub>x</sub>, the separate vehicle apportionment remains similar to the previous assessment whereby the major contributor is from Diesel Cars, followed by Diesel LGVs, HGVs and Petrol Cars, with the remaining vehicle source groups contributing less than 0.8% each.

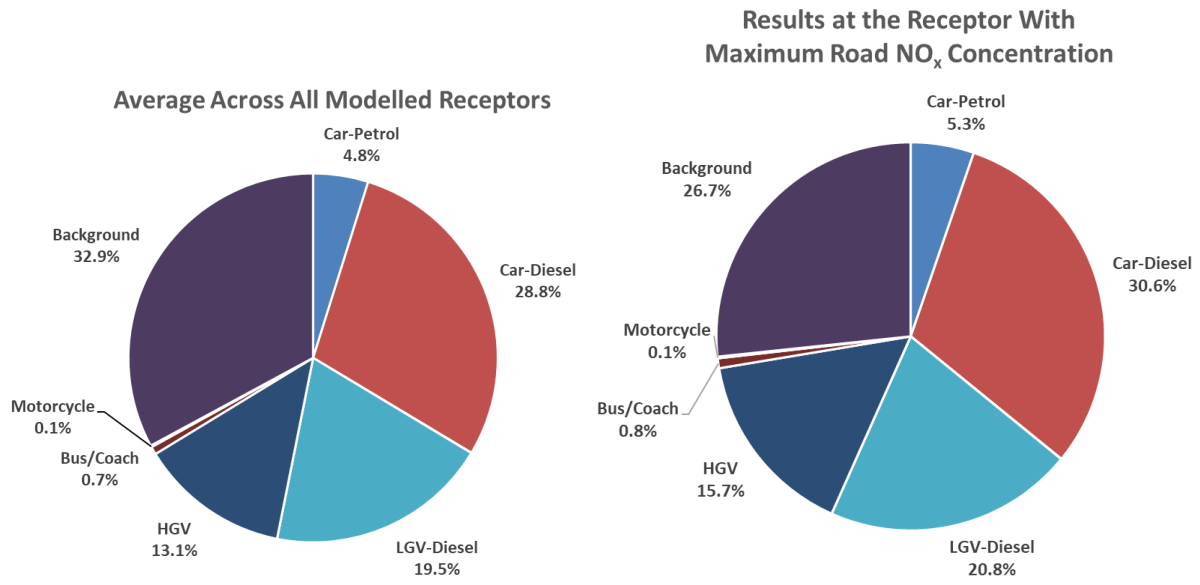
**Table 3.8 – NO<sub>x</sub> Source Apportionment Results: AQMA No.14**

Results	All Vehicles	Car			LGV			HGV	Bus and Coach	Motorcycle	Background
		Petrol	Diesel	EV/LPG	Petrol	Diesel	EV/LPG				
<b>Average across all modelled receptors</b>											
<b>NO<sub>x</sub> Concentration (µg/m<sup>3</sup>)</b>	35.7	2.6	15.3	0.0	0.0	10.4	0.0	7.0	0.4	0.1	17.5
<b>Percentage of Total NO<sub>x</sub></b>	67.1%	4.8%	28.8%	0.0%	0.0%	19.5%	0.0%	13.1%	0.7%	0.1%	32.9%
<b>Percentage Contribution to Road NO<sub>x</sub></b>	100.0%	7.2%	42.9%	0.0%	0.0%	29.1%	0.0%	19.6%	1.0%	0.2%	-
<b>At The Receptor with the Maximum Road NO<sub>x</sub> Concentration (R3)</b>											
<b>NO<sub>x</sub> Concentration (µg/m<sup>3</sup>)</b>	48.1	3.5	20.1	0.0	0.0	13.6	0.0	10.3	0.5	0.1	17.5
<b>Percentage of Total NO<sub>x</sub></b>	73.3%	5.3%	30.6%	0.0%	0.0%	20.8%	0.0%	15.7%	0.8%	0.1%	26.7%
<b>Percentage Contribution to Road NO<sub>x</sub></b>	100.0%	7.2%	41.7%	0.0%	0.0%	28.3%	0.0%	21.4%	1.1%	0.2%	-

# Agenda Item 11



Figure 3.8 – NO<sub>x</sub> Source Apportionment Results: AQMA No.14



## 4 Conclusions and Recommendations

Following the completion of the analysis of both monitoring data and modelled concentrations across the two assessed AQMAs within Swanley, a number of recommendations have been made in terms of the current designations of the AQMAs within Sevenoaks. It should be noted that there is a focus on 2019 monitoring concentrations, with 2019 being used as the baseline year for any modelling carried out. This is due to the COVID-19 pandemic and UK Government enforced restrictions occurring throughout 2020 and 2021 and a reduction/change in typical traffic patterns, resulting in monitored NO<sub>2</sub> concentrations to be lower than what would typically be expected. As such, 2019 has been utilised as a conservative worst-case scenario whilst the long term impacts of the COVID-19 pandemic are not fully understood.

### 4.1 AQMA No.8 Swanley Town Centre

AQMA No.8 is currently designated for exceedances of the annual mean NO<sub>2</sub>, with three monitoring locations located within the AQMA using NO<sub>2</sub> diffusion tubes. Exceedances of the annual mean NO<sub>2</sub> objective have been reported at two of the monitoring locations over the past five years (DT 40 and DT41). However, when distance corrected to the nearest relevant exposure, as per LAQM.TG(22), both sites have predicted annual mean concentrations to be below the AQS objective.

Discrete receptor locations have been modelled throughout the AQMA and two exceedances have been predicted along the High Street, near to the junction to Bevan Place and in close proximity to DT40. Both of these receptors are located at 4m height, as it is assumed there are residential residences above the ground floor commercial units. The model is shown to be overpredicting in this area, and therefore this is considered to be a slight conservative estimation, however even with this in consideration an exceedance is still predicted in this area. No other exceedances have been predicted within the AQMA.

The modelled exceedances are likely due to a small section of this road being modelled as a two-sided street canyon, as identified during the desktop review using Google Streetview. It appears that the development of a larger property is taking place from 2020 onwards, with the façade being brought forwards, therefore predicted to amplify the street canyon effects. It is however not known whether any properties along this stretch are used for residential purposes.

It is advised that the Council continues to monitor throughout this AQMA, especially at the location of DT40, to ensure that NO<sub>2</sub> concentrations continue to remain compliant. The Council should also deploy monitoring closer to any residential properties if they exist along this stretch, including at the façade of the new property once construction is completed. Care should be taken with the development of the High Street along this stretch, as this is located between two junctions where congestion occurs, and further development could further exasperate the street canyon effects observed. If residential properties are present, then the Council should strongly consider implementing measures to reduce pollution concentrations along this stretch if monitoring reports exceedances.

The modelling carried out has not indicated that any amendments to the AQMA boundary are required.

From the source apportionment completed, Diesel Cars and LGVs account for over half of the total NO<sub>x</sub> concentrations predicted at the worst case receptor. Therefore, if any measures need to be implemented to further reduce NO<sub>2</sub> concentrations then it would be advisable to focus on reducing the emissions from these vehicle types.

If monitoring continues to show that the AQMA is compliant and below 10% of the AQS objective in future years following the completion of the development along the High Street, then the Council could consider revoking the AQMA.

### 4.2 AQMA No.14 Junction of Birchwood and London Roads

AQMA No.14 is currently designated for exceedances of the annual mean NO<sub>2</sub> AQS objective and monitoring is completed within, and close to the AQMA using NO<sub>2</sub> diffusion tubes. DT83, located within a section of Birchwood Road considered to be a single-sided street canyon, has reported exceedances for three of the past five years. Once distance corrected to a point of relevant exposure this site continued to predict a

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concentration greater than  $40\mu\text{g}/\text{m}^3$ . All other monitoring locations within or in close proximity to the AQMA have however continually reported concentrations below  $40\mu\text{g}/\text{m}^3$  for the past 5 years.

From the modelling conducted, concentrations at relevant receptors are predicted to be below the AQS objective, however at the discrete receptor R3 (the receptor nearest to DT83) the concentration is within 10% of the AQS objective. R3 is likely to be slightly under predicting, therefore caution should be taken when considering the discrete receptor results in this location, as these are also likely to be under predicted.

It is recommended that monitoring continues to be carried out within this AQMA, and where possible to deploy a monitoring location at a relevant point of exposure in order to confirm whether the model is predicting the results accurately. Despite this, exceedances, even following distance correction, have been reported within the past 5 years so the AQMA should be retained.

The modelling carried out has not indicated that any amendments to the AQMA boundary are required.

From the source apportionment completed, Diesel Cars and LGVs account for approximately half of the total  $\text{NO}_x$  concentrations predicted at the worst case receptor. Therefore, any measures to be implemented to further reduce  $\text{NO}_2$  concentrations should be focused on reducing the emissions from these vehicle types.

The Council should consider whether any updates are required to their recently published AQAP in order to consider any further measures to assist in reducing  $\text{NO}_2$  concentrations within this AQMA, focusing on the relevant vehicle types and at reducing congestion.



## Appendices

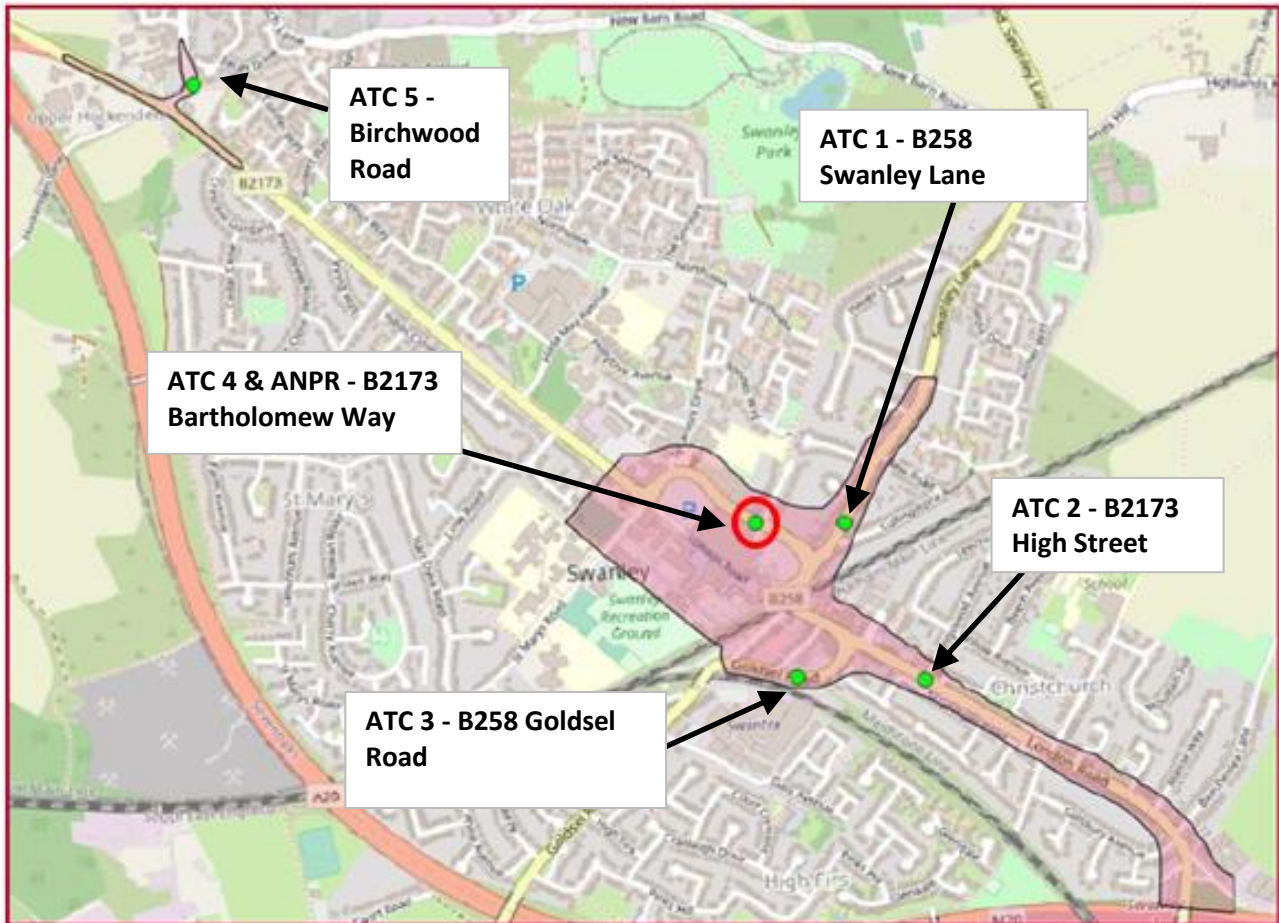
# Agenda Item 11

Sevenoaks District Council  
Detailed Assessment of Swanley AQMAs



## Appendix A – Traffic Data

Figure A.1 – Traffic Survey Locations



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**Table A.1 –Traffic Data**

ID	Source	2019 Traffic Flow (AADT)	% Car	% LGV	% HGV	% Bus/ Coach	% Motorcycle
ATC 1	Traffic Survey	10278	86.4	10.2	2.3	0.1	0.9
ATC 2	Traffic Survey	19800	82.0	12.9	4.0	0.1	0.9
ATC 3	Traffic Survey	11242	84.2	11.7	3.1	0.1	0.9
ATC 4	Traffic Survey	19605	85.7	10.3	2.9	0.1	1.0
ATC 5	Traffic Survey	9675	81.5	15.0	2.6	0.1	0.8
36247	DFT	54690	75.5	18.7	4.1	0.3	1.4
73157	DFT	43754	75.5	18.7	4.1	0.3	1.4
7824	DFT	130741	66.7	20.8	11.7	0.3	0.5
38019	DFT	121788	71.8	19.0	8.6	0.2	0.5
27865	DFT	58459	68.8	17.5	12.6	0.3	0.9

**Table A.2 – User Input Euro Class Splits**

Vehicle Type	Euro 1	Euro 2	Euro 3	Euro 4	Euro 5	Euro 6
Petrol Car	0.00	0.00	0.01	0.19	0.26	0.53
Diesel Car	0.00	0.00	0.00	0.16	0.35	0.49
Petrol LGV	0.00	0.00	0.00	0.00	0.21	0.79
Diesel LGV	0.00	0.00	0.00	0.11	0.22	0.67
RIGID HGV Diesel	0.00	0.00	0.01	0.11	0.37	0.51
ARTICULATE HGV Diesel	0.00	0.00	0.00	0.02	0.02	0.96
Bus Coach Diesel	0.00	0.00	0.02	0.51	0.17	0.31
Motorcycle	0.00	0.00	0.00	0.00	0.00	0.00
Full Hybrid Petrol Car	0.00	0.00	0.01	0.01	0.15	0.82
Full Hybrid Diesel Car	0.00	0.00	0.00	0.00	0.08	0.92
Battery EV Car	0.00	0.00	0.00	0.00	0.04	0.96
LPG Car	0.00	0.00	0.00	0.00	0.00	1.00
Full Petrol Hybrid LGV	0.00	0.00	0.00	0.00	0.00	1.00
Battery EV LGV	0.00	0.00	0.00	0.00	0.08	0.92
LPG LGV	0.00	0.00	0.00	0.00	0.00	0.00





## Appendix B – Verification

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**Table B.1 – Details of Passive NO<sub>2</sub> Monitoring Locations Used for Verification within the Swanley Area, Sevenoaks District Council**

Site ID	X Coordinate	Y Coordinate	Site Type	Height (m)
DT39	551492	168695	Roadside	2.5
DT40	551579	168507	Roadside	2.5
DT41	552175	168162	Roadside	2.5
DT83	550297	169682	Roadside	2.5
DT93	550283	169743	Roadside	2.5
DT94	550283	169743	Roadside	2.0
DT95	550258	169575	Roadside	2.5

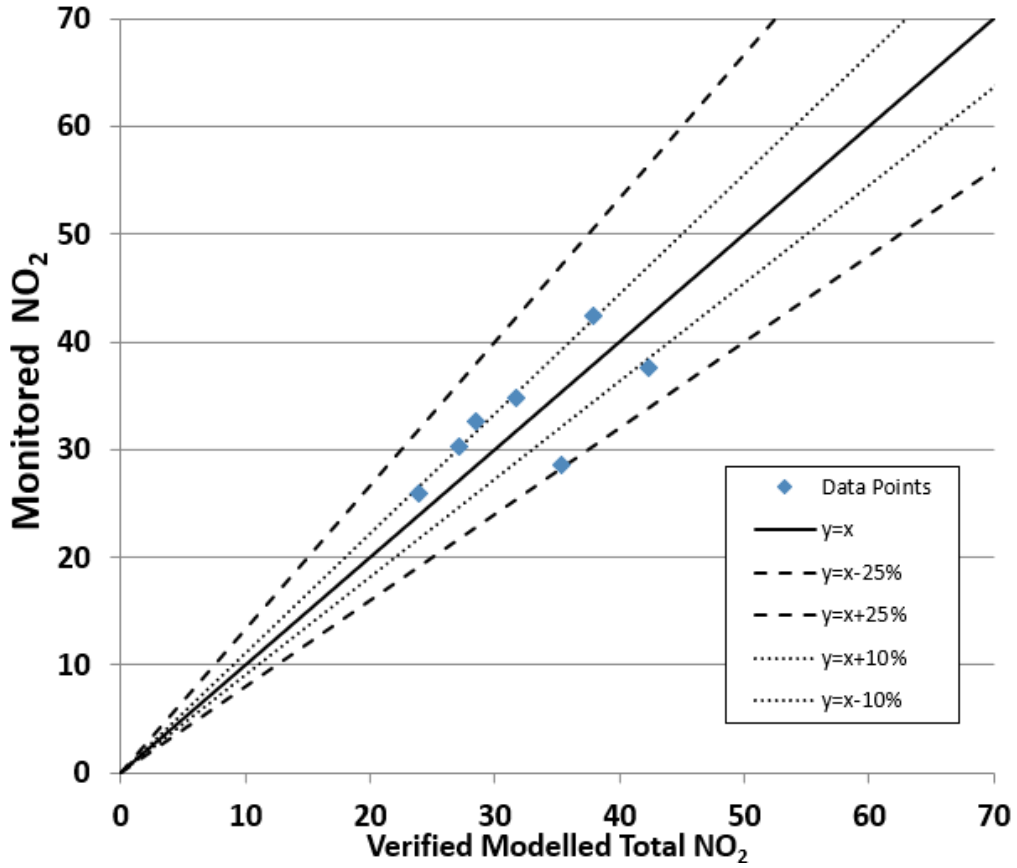
**Table B.2 – Verification**

Site ID	Ratio of monitored road contribution NO <sub>x</sub> / modelled road contribution NO <sub>x</sub>	Adjustment factor for modelled road contribution NO <sub>x</sub>	Adjusted modelled road contribution NO <sub>x</sub> (µg/m <sup>3</sup> )	Adjusted modelled total NO <sub>x</sub> (including background NO <sub>x</sub> ) (µg/m <sup>3</sup> )	Modelled total NO <sub>2</sub> (based upon empirical NO <sub>x</sub> / NO <sub>2</sub> relationship) (µg/m <sup>3</sup> )	Monitored total NO <sub>2</sub> (µg/m <sup>3</sup> )	% Difference (adjusted modelled NO <sub>2</sub> vs. monitored NO <sub>2</sub> )
DT39	2.99	2.517	35.99	54.27	31.69	34.79	-8.92
DT40	2.05		59.96	78.24	42.38	37.52	12.94
DT41	3.19		32.45	48.20	28.46	32.57	-12.61
DT83	3.05		50.56	68.04	37.86	42.44	-10.79
DT93	3.00		20.90	38.38	23.89	25.89	-7.74
DT94	1.70		44.94	62.42	35.34	28.56	23.72
DT95	3.12		27.35	44.83	27.09	30.22	-10.37

The results of the verification is presented in Table B.2 and Figure B.1, and it can be seen that all monitoring sites are modelled to be within the ±25% acceptance level. The verification factor for the model is 2.517, with an RMSE of 4.3µg/m<sup>3</sup> and a R<sup>2</sup> value of 0.491. This verification factor shall be used for all remaining modelled receptors. Whilst DT83 is not modelling an exceedance, whereas a monitored exceedance is reported, it is important to note that with consideration of the model uncertainty as indicated by the RMSE, an exceedance could be considered.



Figure B.1 – Adjusted Verification Monitored NO<sub>2</sub> Concentrations vs. Verified Modelled NO<sub>2</sub>





## Appendix C – Background Concentrations



**Table C.1 – Background Concentrations**

Grid Square (X, Y)	NO <sub>2</sub> (µg/m <sup>3</sup> )	NO <sub>x</sub> (µg/m <sup>3</sup> )
550500, 169500	15.7	21.7
551500, 169500	14.8	20.3
552500, 169500	14.7	20.1
550500, 168500	16.6	23.0
551500, 168500	16.1	22.3
552500, 168500	17.8	24.9

Background locations have been taken from the Defra Background Mapping resource for Sevenoaks District Council.

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**LIABILITY FOR TREES ON COMMONS LAND**

**Cleaner & Greener Advisory Committee - 13 June 2023**

**Cabinet - 15 June 2023**

**Report of:** Deputy Chief Executive & Chief Officer - Finance & Trading

**Status:** For Decision

**Key Decision:** No

**Executive Summary:** This report updates members on the current management of a number of commons pursuant to a scheme made under the Commons Act 1899 and the extent of the Council's liability.

**This report supports the Key Aim of:** a green environment and safer communities

**Portfolio Holder:** Councillor McArthur

**Contact Officer:** Trevor Kennett, Ext. 7407

Adrian Rowbotham, Ext. 7153

**Recommendation to Cleaner & Greener Advisory Committee:** That the recommendations as detailed in this report be considered by the Committee, and its views be submitted for consideration by Cabinet.

**Recommendation to Cabinet:** That the recommendations in this report along with any proposals submitted by the Cleaner & Greener Advisory Committee be considered and approved.

**Reason for recommendation:** Sevenoaks District Council made a scheme for the regulation and management of any Common within the district, under section 1 of the Commons Act 1899. The legal advice on the Council's liability for trees on commons land has significantly changed. the Council's primary obligation is to protect the trees from harm, rather than to pursue active arboriculture management.

## Agenda Item 12

### Introduction

- 1 Sevenoaks District Council made a scheme for the regulation and management of any Common within the district, under section 1 of the Commons Act 1899.
- 2 The scheme made by Sevenoaks Rural District Council, approved by the Secretary of State in 1925 amended in 1963 and 1966.
- 3 The scheme identifies approximately 280 hectares of commons land, in the following locations:- (Appendix A)

### Knole Estate

- Seal Chart
- Fawke Common
- Bitchet Common
- Bitchet Green
- Godden Green
- Land at Blake's Green and Stone Street
- Wickett Common
- Land adjoining Oak Lane/ Glebe Lane
- Land adjoining Bayley's Hill and Pitfield Wood

### Squerrys Estate

- Crockham Hill Common
  - Farley Common
  - Hosey Common
- 4 Previous to 2008, it the Council's responsibility for management of commons land extended to a stewardship role, where maintenance to trees was required, for safety reasons only. The Council notified the owner of the land, who had responsibility for undertaking any work as necessary. Surveys regularly undertaken by the Councils Countryside Ranger Team, or where necessary, commissioned by a tree surgeon.
  - 5 However in 2008 this position was challenged by an agent acting on behalf of one of the commons landowners. In view of this, we obtained Counsel's opinion, to clarify the Council's responsibilities under the Commons Act 1899.
  - 6 In an opinion dated 22 July 2008, Counsel concluded that in his view, the Council is obliged, under the scheme, to seek to ensure that trees on the commons remain in good health, and to remedy injury, disease or decay when it appears. In his opinion, this extends to surveying the trees, and to carry out any work required to them, including pruning, topping and lopping etc.
  - 7 Clearly, this legal opinion, had wide implications for the Council, not only in requiring a survey of all the trees within the defined areas, but also to



undertake any works required, identified from the surveys, and on-going maintenance responsibilities.

- 8 By its very nature, common land is open to public access and many trees line identified walks and abut highways. A particular issue is the A25 running through the Seal Chart Common where traffic management schemes will be necessary to safeguard traffic whilst works are being undertaken. As the public have open access to these areas, public safety is of paramount importance.
- 9 In 2008, due to these identified liabilities, and because of public safety implications, it was imperative that surveys were undertaken and priority works identified from the surveys, was undertaken immediately.

### **Previous Decisions**

- 10 On the 21 October 2008 the Council's Environment Select Committee recommended to Cabinet that the additional expenditure required in 2008/09 of £50,000 be funded from the General Fund Reserve, and additional expenditure in 2009/10 onwards to be considered as part of the 2009/10 budget process. Cabinet approved this request, however no budget provisions agreed for future years and only an initial £50,000 budget was agreed, which was spent in 2008/2009.

### **Current Situation**

- 11 On the 7 September 2022 Kent County Council served an enforcement notice under section 154 of the Highways Act 1980 to the landowner of the Seal Chart Common requesting that all trees and vegetation are cut back that overhang the footpath and carriageways on land to the south and north side of Maidstone Road, Seal within 28 days.
- 12 A site meeting was arranged involving the issuing Highways Inspector and the Council's Countryside Manager to discuss which works need this urgent attention. It would appear to be the same area that was cut back in 2008, which obviously over the last 14 years have grown back stronger and higher.
- 13 The 2023/2024 Parks-Rural budget contains a small budget provision for works on commons land, which is not for tree maintenance, (on average around £3,000 per Common, £23,000 in total), and is insufficient to undertake the survey work, and identified works, now required. It was agreed between the Council and Highways Authority that junction works would be completed for highway safety reasons (line of sight) at a cost of £1,000. These works were completed in November 2022, however if the entire stretch of the A25 needed arboriculture works that runs on the Seal commons land it would cost in the region of £60,000.

## Agenda Item 12

### Further Legal Advice

- 14 Given the massive quantities of trees on these privately owned commons land within the Sevenoaks scheme, recent case law and the disproportionate responsibility and cost liability on the Council, further legal counsel's advice was sought on the 5<sup>th</sup> May 2023.
- 15 Having reviewed the previous legal advice obtained in 2008 and in light of the decision of the High Court in 2014, (Norbrook Laboratories) the legal advice on the Council's liability for trees on commons land has significantly changed.
- 16 A benchmarking exercise was carried out through our membership of the Association of Public Sector Excellence (APSE) on how other Councils handled their responsibility under the Commons Act 1896. All Councils surveyed reported that they did not undertake any arboricultural works on commons land that was privately owned. Their role was as a guardian of the commons to ensure trees and commons rights were preserved.

### Recommendations

- 17 It is now Counsel's opinion that as to the Council's duty to preserve trees on the Commons, the Council's primary obligation is to protect the trees from harm, rather than to pursue active arboriculture management.

The Council should:

- 18 Ensure as there are identified owners of the Commons the duty of care under the Occupiers Liability Act imposes a statutory duty on an occupier of that land on the visitor's safety to that land.
- 19 Under article 3 of the Commons Act 1899 the Council's primary responsibility is to protect and preserve the trees on the commons, in that to keep safe from any harm, such as stopping unauthorised felling or fencing off areas of trees from access to allow rest and revival of the trees. This is supported by Article 9 of the Commons Act 1899 which allows the Council to make bye-laws for prohibiting any person without lawful authority from cutting, felling or damaging any timber or other tree on Commons land.
- 20 Change its working practice, to reflect Counsels advice and recent case law as it is not reasonable to expect the Council to bear all costs for any arboriculture works across the commons land scheme.

## **Key Implications**

### Financial

Given the further legal advice the current budget for commons land is adequate to ensure we are managing our responsibilities under the scheme created in 1925 under the Commons Act 1899.

### Legal Implications and Risk Assessment Statement.

In 2008 the Counsel's opinion was that the Council, were obliged, where a scheme exists for Commons land, under the Commons Act 1899, to carry out any works identified, as necessary on trees.

However, following further legal advice and the High Court ruling for Norbrook Laboratories the Council's responsibility only extends to preserving the commons trees from hard and not arboriculture management.

### Equality Assessment

The decisions recommended through this paper have a remote or low relevance to the substance of the Equality Act. There is no perceived impact on end users.

### Net Zero Implications

Members are reminded of the Council's stated ambition to be Net Zero with regards to carbon emissions by 2030. The decisions recommended in this paper directly impact on this ambition. The impact has been reviewed and there will be a very slight increase on carbon emissions produced in the district as a result of this decision, given the machinery required to maintain the trees. In these circumstances the maintenance of commons land trees have little or no effect on carbon emissions.

#### **Appendices**

Appendix A - Commons Map.

#### **Background Papers**

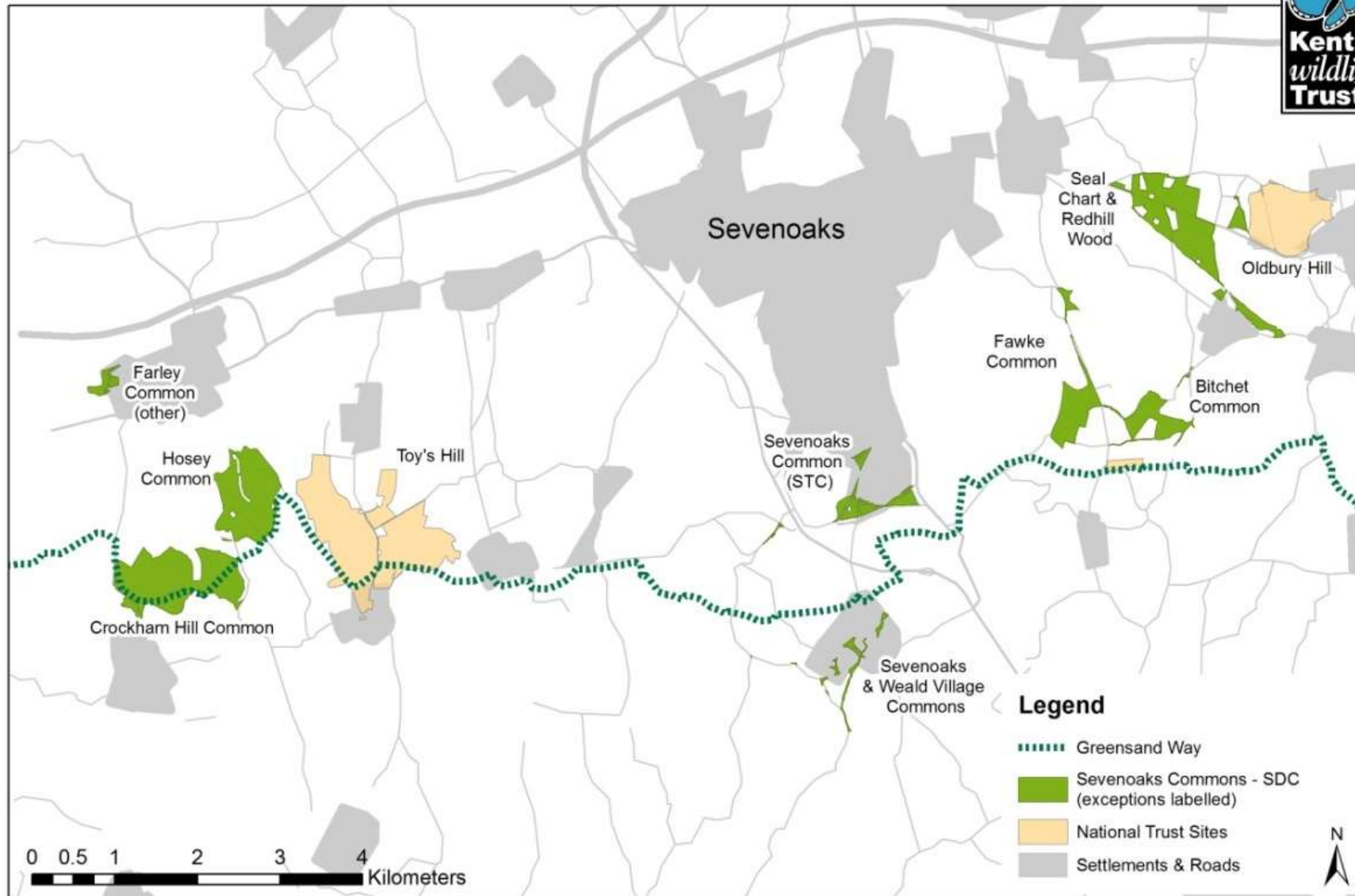
None.

**Adrian Rowbotham**

**Deputy Chief Executive and Chief Officer - Finance & Trading**

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# Sevenoaks Greensand Commons



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**THE UK GOVERNMENT RESILIENCE FRAMEWORK**

**Cleaner & Greener Advisory Committee - 13 June 2023**

**Report of:** Deputy Chief Executive & Chief Officer, Finance & Trading

**Status:** For Information

**Key Decision:** No

**Executive Summary:** This report updates the Cleaner & Greener Advisory Committee about a newly published (December 2022) UK Government Resilience Framework.

**This report supports the Key Aim of:** Protect our residents by making sure that all of our policies, partnerships and teams are working together to safeguard people and communities.

**Portfolio Holder:** Cllr. Margot McArthur

**Contact Officer:** Adrian Rowbotham, Ext. 7153

Trevor Kennett, Ext. 7407

**Recommendation to Cleaner & Greener Advisory Committee:** That this report be considered by the Committee, and its views be submitted for consideration by Cabinet.

**Recommendation for Cabinet:** That the report along with any views submitted by the Cleaner & Greener Advisory Committee be considered and the report be noted.

**Reason for recommendation:** The framework proposes a number of fundamental changes to the current local arrangements for resilience forums and accountability.

## Agenda Item 13

### Background

1. The new Framework is built around three fundamental principles: a need for a shared understanding of the risks we face; focus on prevention and preparation; and that resilience requires a whole of society approach.
2. The Government framework proposes a number of fundamental changes to the current local arrangements for resilience forums and accountability, namely:
  1. The creation of a new UK Government Resilience Directorate within the Cabinet Office.
  2. Local Resilience Forums in England will be strengthened and enhanced, in recognition of the vital role they play in resilience.
  3. Models of funding for Local Resilience Forums (LRFs) in England will be reviewed to ensure they are appropriate to the expectations placed upon them.
  4. A new Resilience Academy built out of the Emergency Planning College and skills and training pathway will ensure that all those who work on resilience have the capability and knowledge they need to play their part.
  5. the UK Government will work with the sector to pilot evolving the nature of the LRF Chair role, including considering a full time permanent role occupied by an appropriately qualified and experienced individual who will become the Chief Resilience Officer (CRO) for each LRF area.
3. Clear mechanisms and expectations for accountability between LRF Chief Resilience Officers and executive local democratic leaders will make LRFs more accountable to the communities that they serve and provide a mechanism for local communities to hold local leaders to account for driving and delivering resilience.

### Introduction

4. The professionalism and commitment of all agencies who contribute to the UK's resilience is extraordinary and therefore we have a well-established framework for civil protection in the UK. But the last few years have exposed the need to build on these strong foundations and strengthen resilience in order to better prevent, mitigate, respond to and recover from the risks facing the UK.
5. The framework is the first articulation of how the UK Government will deliver on a new strategic approach to resilience. It is based on three core principles:
  - A developed and shared understanding of the civil contingencies risks we face is fundamental;
  - Prevention rather than cure wherever possible: a greater emphasis on preparation and prevention; and



- Resilience is a ‘whole of society’ endeavour, so we must be more transparent and empower everyone to make a contribution.
6. The framework focuses on foundational building blocks of resilience, setting out the plan to 2030 to strengthen the frameworks, systems and capabilities which underpin the UK’s resilience to all civil contingencies risks. The framework’s implementation window reflects the UK Government’s commitment to implement the systemic changes needed to strengthen resilience by 2030.
  7. The framework proposes measures and investment to enable the UK’s resilience system to prevent risks manifesting or crises happening where possible. But, while prevention is a key principle, it acknowledges that you cannot replace careful and effective management of emergencies as they occur.
  8. The new Resilience Directorate in the Cabinet Office will drive the implementation of the measures set out in the framework and develop ongoing resilience programmes. This will include building on the National Security Risk Assessment (NSRA) to consider the chronic vulnerabilities and challenges that arise from the geopolitical and geo-economic shifts, systemic competition, rapid technological change and transnational challenges such as climate change, health risks and state threats that define contemporary crises.
  9. This framework focuses on drawing together the many actors and programmes across the resilience system. The framework primarily outlines action for England and the UK Government in areas where responsibilities are reserved to the UK Government.

### 2030 Actions

10. By 2023 the UK Government plans to:
  - Understand that the national and local risks will be dynamic, driven by data and insight where appropriate, and informed by the best UK and international expertise and experience.
  - The UK Government will communicate about risk in an accessible, actionable and transparent way, so that everyone understands the risks they should plan for and how to protect themselves.
  - In every part of the resilience system, responsibilities and accountability will be clear, coordinated, and coherent. The crisis management and resilience capabilities within the UK Government will be overhauled and strengthened.
  - Local Resilience Forums in England will be strengthened and enhanced, in recognition of the vital role they play in resilience.
  - Partnerships with the private sector and experts will be strengthened to deliver and inform vital work on resilience.
  - A strengthened partnership with the Voluntary and Community Sector will support them to maximise their contribution to resilience at local and national level.

## Agenda Item 13

- Models of funding for Local Resilience Forums (LRFs) in England will be reviewed to ensure they are appropriate to the expectations placed upon them.

11. A new Resilience Academy built out of the Emergency Planning College and skills and training pathway will ensure that all those who work on resilience have the capability and knowledge they need to play their part. A reinvigorated National Exercising Programme will test preparedness throughout the resilience system.

### **The Local Tier & Local Resilience Forums**

12. The multi-agency work across planning, preparation, response and recovery at the local level will continue to be the building block of the UK's resilience. All risks and emergencies and their impacts are local; only some are regional or national.

13. The recent Post Implementation Review of the Civil Contingencies Act 2004 made clear that the core principles of subsidiarity and local leadership remain critical. However, The Government want to recognise that expectations and pressures on local resilience structures have grown significantly over recent years, and that this is unlikely to change in the future.

14. In recognition of the central, and growing, role of LRFs and to ensure that all parts of England can anticipate, prevent, prepare for, respond and recover from risks and emergencies, the UK Government plan to work to significantly strengthen LRFs. There are three key pillars to this reform: Leadership, Accountability, and Integration of resilience into the UK's levelling up and growth mission and wider local policy and place making.

15. The Government's aim is to empower LRFs, local partners and local leaders to consider, drive and improve resilience across the places for which they are responsible. They will be given a clear mandate to support the building of more resilient communities and places that are best able to adapt and respond to, and recover from risks, emergencies and disruptive events and to take full advantage of the opportunities of levelling up. This will include identifying those communities most vulnerable to key risks and addressing these vulnerabilities to build their resilience.

### **Leadership of LRFs in England**

16. As the role and expectations on LRFs have grown to meet the varied challenges of recent years, so too has the role of LRF Chairs. For many years LRFs have been led to great effect by committed senior leaders drawn from a variety of responder organisations, including the Police, Fire Service and Local Authorities. This has typically been as part of a wider role within their organisations that included a range of other duties and responsibilities. The

UK Government will work with LRFs and their members to ensure LRF leaders have the resources, capacity, and capability to sustain this work as they engage with an ever more challenging risk landscape and drive resilience in their areas.

17. It is critical to the success of LRFs that senior leaders from the organisations outlined in the CCA and beyond continue to take a key leadership role in the work of LRFs. It is equally vital to ensure that LRF Chairs have the capacity and capability to lead LRFs in delivery of the strengthened roles and responsibilities we are proposing.
18. They will need the time and space to fully embed themselves and their LRFs in wider local structures - including working in close partnership with locally elected democratic leaders and the full range of senior leaders across local government and responder organisations. To best enable this, the UK Government will work with the sector to pilot evolving the nature of the LRF Chair role, including considering a full time permanent role occupied by an appropriately qualified and experienced individual who will become the Chief Resilience Officer (CRO) for each LRF area.
19. The UK Government will set clear expectations for LRF Chief Resilience Officers to lead the building of resilience and delivery of resilience activity in their areas and they will be accountable to executive local democratic leaders. This will give these democratic leaders a clear role in ensuring effective delivery of resilience activity, including integrating resilience into wider local delivery and levelling up.

### **Accountability for LRFs in England**

20. Strengthening the accountability and assurance across LRFs in England will ensure local leaders have key tools to drive the building of resilience and multiagency collaboration in their communities. Clear mechanisms and expectations for accountability between LRF Chief Resilience Officers and executive local democratic leaders will make LRFs more accountable to the communities that they serve and provide a mechanism for local communities to hold local leaders to account for driving and delivering resilience.

### **Standards and regulation**

21. The UK Government will introduce standards on resilience and develop an action plan to deliver these across the private sector, where these do not already exist, to give a clear benchmark on what 'good' looks like for resilience. These standards on resilience will be non-statutory, and adjusted to take into account the unique sector landscapes, priorities, needs, and interlinkages with other sectors, to ensure that expectations are appropriate and not overly burdensome or disproportionate to the benefits they can deliver.

### Resilience skills

22. At the centre of our professionalisation offering will be a new UK Resilience Academy (UKRA), which will be the heart of a network of similar UK-Government affiliated providers and deliver leadership and learning to all those in the resilience system. This will be built up and out of the Cabinet Office's Emergency Planning College (EPC) which is already partnered with the UK GSCU.

### Key Implications

#### Financial

Parking income would remain unchanged.

#### Legal Implications and Risk Assessment Statement.

No legal implications have been identified in this report.

#### Equality Assessment

No decisions are being made within this report, so there is low relevance to the substance of the Equality Act.

#### Net Zero

Members are reminded of the Council's stated ambition to be Net Zero with regards to carbon emissions by 2030. The decisions recommended in this paper directly impact on this ambition. The impact has been reviewed and there will be no increase or decrease on carbon emissions produced in the district as a result of this decision.

### Conclusions

Given that technology now plays a significant and vital role in paying for parking and that full parking payment has been made, it is fair to cancel keying mistakes made by the user.

#### **Appendices**

Appendix A - UK Government Resilience Framework

#### **Background Papers**

None.

**Adrian Rowbotham**

**Deputy Chief Executive and Chief Officer - Finance & Trading**



HM Government

# The UK Government Resilience Framework

December 2022







HM Government

# The UK Government Resilience Framework

December 2022

This information is also available on the GOV.UK website:  
<https://www.gov.uk/government/publications/the-uk-government-resilience-framework>

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# Foreword from the Chancellor of the Duchy of Lancaster

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These are unsettled and troubling times. Russia's brutal invasion of Ukraine; the wide ranging impacts of the COVID-19 pandemic; increasing signs of the impact of climate change; and constant and evolving cyber challenges are recent examples of an evolving threat picture.

We live in an increasingly volatile world, defined by geopolitical and geo-economic shifts, rapid technological change and a changing climate. This context means that crises will have far reaching consequences and are likely to be greater in frequency and scale in the next decade than we have been used to. We have a responsibility to prepare for this future.

This challenge is not unique to the United Kingdom but faced by countries around the world. However, we must act now to bolster the United Kingdom's resilience and ensure we have plans to prepare for and mitigate a wide range of risks when they arise on our shores, ensuring that we can face the future with confidence.

We have bold and comprehensive plans to build resilience to specific risks. We have launched our Net Zero Strategy, the National Cyber Strategy and the British Energy Security Strategy, all of which tackle some of the most pressing challenges we face. We are also refreshing our Integrated Review to ensure that the UK's security, defence, development and foreign policy strategy is keeping pace with the evolving environment.

But alongside these plans, we need to strengthen the underpinning systems that provide our resilience to all risks. This UK Government Resilience Framework is our plan to achieve this.

The core of the Framework is built around three fundamental principles: that we need a shared understanding of the risks we face; that we must focus on prevention and preparation; and that resilience requires a whole of society approach.

This Framework is a broad and tangible set of actions. It is the first step in our commitment to develop a wide and strategic approach to resilience. We are committed to working with partners, industry and academia from across the UK to implement this Framework but also as we continue to develop our approach.

A strong resilience system – including UK Government departments, devolved administrations, local authorities, emergency services and the private and voluntary and community sectors – is more important than ever.

Working together to build our national resilience will mean we are better equipped to tackle the challenges that come our way, ensuring businesses grow, our communities thrive and citizens can build a brighter future.

A handwritten signature in black ink, appearing to read 'Oliver Dowden', followed by a long horizontal flourish.

**Rt Hon. Oliver Dowden CBE MP** | Chancellor of the Duchy of Lancaster

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# UK Government's Approach to Resilience

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1. The professionalism and commitment of the people who contribute to the UK's resilience is extraordinary and we have a well established framework for civil protection in the UK. But the last few years have exposed the need to build on these strong foundations and strengthen our resilience in order to better prevent, mitigate, respond to and recover from the risks facing the nation. That is why the UK Government committed, in the *Integrated Review*,<sup>1</sup> to a new Resilience Strategy.
2. The framework is the first articulation of how the UK Government will deliver on a new strategic approach to resilience. It is based on three core principles:
  - A developed and shared **understanding of the civil contingencies risks** we face is fundamental;
  - Prevention rather than cure wherever possible: a greater emphasis on **preparation and prevention**; and
  - Resilience is a **'whole of society' endeavour**, so we must be more transparent and empower everyone to make a contribution.
3. This framework focuses on the foundational building blocks of resilience, setting out the plan to 2030 to strengthen the frameworks, systems and capabilities which underpin the UK's resilience to all civil contingencies risks. The framework's implementation window reflects the UK Government's long term commitment to the systemic changes needed to strengthen resilience over time and matches the commitments made in the *Integrated Review*. Delivery has already begun and we are making quick progress on our commitments with 12 expected to be completed by 2025 (see *Annex B*).
4. It proposes measures and investment to enable the UK's resilience system to prevent risks manifesting or crises happening where possible. But, while prevention is a key principle, it cannot replace careful and effective management of emergencies as they occur. Some risks are inherently unpredictable, or manifest in unpredictable ways – whether over a wide geographic area, or as a result of a wide range of triggers and/or other risks. For example, we cannot stop substantial rainfall from causing flooding, or entirely eradicate the risk of cyber threats from hostile actors. For this reason, this framework also proposes actions to improve response and preparation for risks and ensure that partners throughout the system are able to play their part fully. There will be a shift away from simply dealing with the effects of emergencies towards a stronger focus on prevention and preparation for risks.

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1 [Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy](#)

5. This is just the starting point for the UK Government’s ambitions on resilience. We have already introduced new structures at the heart of the UK Government to focus on resilience and ensure decisions are made with an eye on the challenges we might face. The new Resilience Directorate in the Cabinet Office will drive the implementation of the measures set out in this framework and develop our ongoing resilience programme. This will include building on the National Security Risk Assessment (NSRA) to consider the chronic vulnerabilities and challenges that arise from the geopolitical and geoeconomic shifts, systemic competition, rapid technological change and transnational challenges such as climate change, health risks and state threats that define contemporary crises.
6. This work will bring together and complement the bespoke plans and programmes of work which manage individual risks and build cross cutting capabilities that underpin resilience across Government. This includes:
  - The UK Government 10 Point Plan for a Green Industrial Revolution<sup>2</sup> and the Net Zero Strategy<sup>3</sup> set out a clear vision for how the UK Government will transform the production and use of energy, in a decisive shift away from fossil fuels. The British Energy Security Strategy<sup>4</sup> accelerates this plan, in a series of bold commitments which put Great Britain at the leading edge of the global energy revolution. The Energy Security Strategy will deliver a more independent, more secure energy system and support consumers to manage their energy bills. That Strategy sets out how the UK Government will enhance the use of wind, new nuclear, solar and hydrogen, and support the production of domestic oil and gas in the near term.
  - The UK was among the first countries to legislate for climate adaptation and the Climate Change Act provides a strong framework for the UK Government. This includes commitments to produce a UK Climate Change Risk Assessment<sup>5</sup> to identify risks, followed by a National Adaptation Programme<sup>6</sup> to address those risks every five years. The UK Government fully recognises the scale of the challenge of adapting to climate change, and is developing a Third National Adaptation Programme (NAP3) which will set out how we will meet that challenge. Having undertaken the Third Climate Change Risk Assessment, the UK Government is committed to significantly increasing efforts to respond to identified risks and opportunities in NAP3.
  - The UK Government has developed a Supply Chains Resilience Framework<sup>7</sup> which highlights 5 areas to explore when building resilience in supply chains. The framework aims to provide a useful guide for both public and private sector organisations in considering potential actions aimed at mitigating risks and vulnerabilities in their supply chains.

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2 [The ten point plan for a green industrial revolution – GOV.UK](#)

3 [Net Zero Strategy: Build Back Greener – GOV.UK](#)

4 [British energy security strategy – GOV.UK](#)

5 [UK Climate Change Risk Assessment 2022 – GOV.UK](#)

6 [Climate change: second national adaptation programme \(2018 to 2023\) – GOV.UK](#)

7 [Supply chain resilience – GOV.UK](#)

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- In 2021, the UK Government published the National Cyber Strategy,<sup>8</sup> building on the National Cyber Security Strategy 2016-2021 and the Integrated Review. A key pillar of the strategy focuses on “building a resilient and prosperous digital UK”. Through this pillar, the Cyber Strategy aims to improve understanding of cyber risk, prevent and resist cyber attacks more effectively, and strengthen resilience at the national, and organisational level, to prepare for, respond to and recover from cyber attacks.
7. This framework focuses on drawing together the many actors and programmes across the resilience system. The framework primarily outlines action for England and the UK Government in areas where responsibilities are reserved to the UK Government. All four nations of the United Kingdom share the same goal – to protect our citizens from the impacts of crises – and resilience encompasses both reserved and devolved matters. Where elements of the resilience system are overseen by the UK Government, the UK Government is committed to work in partnership with the devolved administrations (DAs). Significant elements of resilience are wholly the responsibilities of the devolved administrations. The resilience arrangements in each part of the UK are set out in *Annex A*.

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8 [National Cyber Strategy 2022](#)

# Executive Summary

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8. This framework focuses on the UK's ability to anticipate, assess, prevent, mitigate, respond to, and recover from known, unknown, direct, indirect and emerging civil contingency risks.<sup>9</sup> It is applicable to building resilience to risks that have a domestic source, and those that have their roots overseas (but which would impact the UK). In this context, the framework uses 'resilience' to refer to an ability to withstand or quickly recover from a difficult situation, but also to get ahead of those risks and tackle challenges before they manifest.
9. The framework is guided by the three core principles which characterise the UK Government's strategy for resilience:
- **A developed and shared understanding of the civil contingencies risks we face is fundamental:** it must underpin everything that we do to prepare for and recover from crises. The risks that impact our prosperity and stability are complex and dynamic, and they pose more profound structural and societal questions. We need to adapt the resilience system to face these and incentivise risk-based decision making around our new understanding. This will start with the actions outlined in this document around practical steps to improve our risk system;
  - **Prevention rather than cure wherever possible:** resilience-building spans the whole risk cycle so we must make sure we focus effort across the cycle, particularly before crises happen. It is more cost effective to invest in risk prevention and building resilient systems that can withstand crises rather than to rely solely on having the world's best crisis response systems. Accomplishing this means putting resilience at the heart of our decision making and investment, well beyond areas that are explicitly focused on emergencies. This framework sets the direction for actions we are already taking to improve the system, with the new standing resilience function in the UK Government taking forward sustained work to identify issues that require action to prevent or mitigate risk; and
  - **Resilience is a 'whole of society' endeavour,** so we must be more transparent and empower everyone to make a contribution. We need to prepare and respond to emergencies on a whole of system, whole of society scale. This means organising society in a coherent, resilience-focused way, but also taking a much broader focus on resilience. This includes how we structure the centre of the UK Government, what we expect of businesses, the local tier, voluntary organisations, community groups, and the public.
10. This framework represents a package of measures to broaden and strengthen the resilience system centred on six themes: risk, responsibility and accountability, partnership, community, investment and skills. For each theme this framework aims to demonstrate how our proposals will deliver tangible changes and benefits for those

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9 This framework specifically focuses on civil contingencies risk and the [HM Treasury Orange Book](#) supports the UK Government to identify and manage a very broad range of risks, including, but not limited to technological, economic, legal and reputational risks.

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working in the resilience system and the public. A list summarising the actions we will take is at *Annex B*.

### 11. By 2030:

- Our understanding of national and local **risks** will be dynamic, driven by data and insight where appropriate, and informed by the best UK and international expertise and experience. Within the UK Government there will be clear ownership of all risks, including complex and catastrophic risks, underpinned by sharpened governance and accountability. The UK Government will communicate about risk in an accessible, actionable and transparent way, so that everyone understands the risks they should plan for and how to protect themselves. Decision making on risk by ministers and officials will be informed by dynamic and expert data and insight, and will take into account underlying vulnerabilities in communities impacted by risks.
- In every part of the resilience system, **responsibilities and accountability** will be clear, coordinated, and coherent. The crisis management and resilience capabilities within the UK Government will be overhauled and strengthened. Local Resilience Forums in England will be strengthened and enhanced, in recognition of the vital role they play in resilience. The UK Government will have the emergency powers we need to act decisively in a crisis. Standards will be introduced throughout the public sector, to drive continuous improvement in preparedness.
- **Partnerships** with the private sector and experts will be strengthened to deliver and inform vital work on resilience. To support a new way of partnership working with the private sector, the UK Government will provide guidance on risk in order to help the private sector to meet new standards on resilience. These standards will be enforced through regulation only in the highest priority cases. The UK Government will build on existing structures to draw in external expertise and challenge to ensure that our approach is based on wide ranging knowledge and experience. The UK Government will continue to show leadership on resilience through international fora and through strong bilateral relationships, recognising the risks we face are part of an interconnected world. This will include providing support to international partners to build their own resilience, and working together to tackle risks before they manifest.
- A strengthened partnership with the Voluntary and Community Sector will support them to maximise their contribution to resilience at local and national level. Recognising the importance of protecting **communities** from the impacts of emergencies and crises, the UK Government will strengthen standards for statutory responders in England to consider community resilience as an essential part of their work. Support for vulnerable groups will be improved through better guidance for the local tier, and through work with the operators of essential services to identify and support vulnerable customers in an emergency.
- Resilience **investment** decisions in the UK Government will be underpinned by a shared understanding of risk and priorities, allowing a better and more efficient use of our capabilities and resources. Models of funding for Local Resilience Forums (LRFs) in England will be reviewed to ensure they are appropriate to the expectations placed upon them. The UK Government will incentivise further investment in resilience by the private sector through sharing better information on risk, to inform



investment decisions. Better information on risk will also help communities and households to decide how to invest in their own preparedness.

- A new Resilience Academy built out of the Emergency Planning College and **skills** and training pathway will ensure that all those who work on resilience have the capability and knowledge they need to play their part. A reinvigorated National Exercising Programme will test preparedness throughout the resilience system.
12. This work will be driven by the UK Government's new standing resilience function, the Resilience Directorate, and delivery has already begun. There are many actions in the framework that the Government is committed to delivering in the next year, including the first annual statement to Parliament on civil contingency risk and resilience, launching the UK Resilience Academy and appointing a Head of Resilience.
  13. The UK Government is committed to working in partnership with the devolved administrations to implement change across the four nations where appropriate. The direct scope of the framework is action for England, UK Government departments and in areas where responsibilities in Scotland, Wales and Northern Ireland are reserved to the UK Government. Nevertheless, there are clearly areas where alignment and shared objectives will deliver a better result for the four nations. The end of each chapter outlines the applicability of the proposals across the UK.



# Our action plan: **Risk**

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## On risk, we are already taking action by:

Refreshing the National Security Risk Assessment (NSRA) process, so it will look over a longer timescale, include multiple scenarios, look at chronic risks and interdependencies and use the widest possible range of relevant data and insight alongside external challenge.

Creating a new Head of Resilience, to guide best practice, encourage adherence to standards, and set guidance.



## By 2025, we will:

Clarify roles and responsibilities in the UK Government for each NSRA risk, to drive activity across the risk lifecycle.

Conduct an annual survey of public perceptions of risk, resilience and preparedness.

Introduce an Annual Statement to Parliament on civil contingencies risk and the UK Government's performance on resilience.

Develop a measurement of socio-economic resilience, including how risks impact across communities and vulnerable groups – to guide and inform decision making on risk and resilience.



## By 2030, we will:

Make the UK Government's communications on risk more relevant and easily accessible.

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14. The starting point of all resilience work is understanding risk. In this framework we use ‘risk’ to refer to civil contingency risk.<sup>10</sup> A risk can be any event that poses a serious threat to safety and security of livelihoods either locally or nationally, this can include, amongst others, threats to lives; health; critical infrastructure; economy; and sovereignty. These risks can be acute (e.g. flooding and terrorist attacks) or chronic (e.g. an enduring health emergency or serious and organised crime).
15. In all parts of the resilience system, we are driven by the risks we face. Those risks determine which capabilities we need, which skills we need to develop, who we need to work with, how we invest our money, how we act in a crisis, and how we best recover from crises and emergencies. Some risks are well understood and are relatively easy to measure and predict, whilst others currently remain unknown and can only be identified in advance through sustained research and analysis across multiple fields of expertise. For this reason, we will always need to consider the right balance between risk-specific capabilities and cross-cutting capabilities to ensure we can be as prepared as possible for the widest possible range of risks. This framework focuses on the cross-cutting capabilities that are delivered through the resilience system, with risk-specific capabilities addressed through work being conducted across the UK Government and by partners.
16. The risks that influence our prosperity and stability are complex, evolving, and sometimes uncertain and this raises profound structural and societal questions. The UK Government needs to adapt the system to face these and incentivise risk-based decision making. To achieve this, we will make the UK Government’s risk assessment more dynamic and insight- and foresight-led, taking greater account of complex, cascading and chronic risks. Central to this will be working closely with LRFs in England as well as wider partners to ensure they can make full use of these new assessments.
17. Alongside the framework for approaching civil contingency risks outlined here, the UK Government will work with the Government Risk Profession and the Government Risk Centre of Excellence to ensure appropriate cohesion and collaboration with the broader risk management community across the UK Government and the wider resilience sector. The Head of the Government Risk Profession will work closely with the new Head of Resilience, introduced later in this chapter. Further, the approach to assessment of civil contingency risk outlined in this chapter will complement broader risk management practices in the public sector, as outlined in the HM Treasury Orange Book.<sup>11</sup>

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10 Primarily those that are outlined in the National Security Risk Assessment (NSRA), and its public counterpart the National Risk Register (NRR). Risks are also reflected locally in the Community Risk Registers (CRRs) of the four nations of the UK. All of these draw together the most significant risks from a range of more specialised assessments. The risks covered in the NSRA and NRR include malicious and non-malicious risks, and threats and hazards respectively. In this context we do not consider wider risks (such as financial, organisational or social), except where these are direct impacts of a civil contingency emergency. For example, the overall resilience of the NHS is not a civil contingency risk, but the impact of a civil contingency emergency on the operation of the NHS is in scope.

11 [The Orange Book](#)

## Risk Assessment

18. Understanding civil contingencies risk is essential to everything we do, and our risk assessment methodology and processes are how we do this. Most risks are, by their nature, dynamic and hard to predict. We cannot therefore always perfectly predict how risks develop and manifest. But as the global risk picture evolves, and the impacts become more interconnected and complex, the way that we assess risk must also evolve. Assessment must be based on a wide range of relevant data, information and insight, and must be carried out on a timeline that bears proportionate relation to how risks develop.

### The National Security Risk Assessment

19. **The National Security Risk Assessment (NSRA) will remain the main tool for assessing the most serious civil contingencies risks facing the UK.** The NSRA assesses, compares and prioritises the top national level risks facing the UK, focusing on both likelihood of the risk occurring and the impact it would have, were it to happen. This remains an invaluable tool for policy makers and operational leaders to form contingency plans for a wide range of scenarios that might impact on a national or local level.
20. In the last year, the UK Government has led the most substantial review of the NSRA since its inception (in the early 2000s), in conjunction with the Royal Academy of Engineering. Although the fundamentals of the NSRA remain solid, we have identified a set of significant and ambitious changes to ensure the NSRA is comprehensive, robust and incorporates extensive expert challenge. **The UK Government's ambition is to create an NSRA process which readily invites external challenge from experts, academia, industry and the international risk community. Relevant information from the NSRA, sensitivity permitting, will be openly available to the public.** By doing this we can maintain the UK's reputation as exponents of best practice in national risk assessment. To achieve this, the UK Government will work to make sure that the NSRA:
- Includes clearer separate consideration of the interplay between **acute and chronic risks** as they require different planning and responses and are not equally measured through an identical process. Currently both are included in the assessment. However, we will do more to differentiate our approach to these two categories of risk in order to aid better planning. Linked to this, risks with significantly different planning and/or responses in their different manifestations will be represented by **multiple scenarios in the NSRA**, to aid planning against a wider range of possible impacts. Across all risks under the NSRA, we will improve how we factor in **consideration of impacts and vulnerabilities** to produce more accurate overall judgements.
  - **Uses the widest possible range of relevant data and insight.** For example, the National Situation Centre will expand the data sources on which the NSRA risk assessment is based. The UK Government will also increase the role of external expertise in the NSRA process.

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- **Lengthens the timescale over which risks are measured.** It is currently over a two year period for most risks but we will look to measure some risks over a five year period where appropriate, while still providing a robust assessment of likelihood. We will identify the most efficient way to visualise risks measured over different timescales on the same matrix.

21. Further to these changes, in the longer term the UK Government will move towards making the NSRA a more live and interactive product, in order to provide resilience practitioners and policymakers at national and local levels with better risk assessment to inform their work. The benefits of this approach will be reflected in the National Risk Register (NRR), which is the publicly available counterpart of the NSRA and is important in communicating about risk with resilience practitioners.

### Wider UK Government Risk assessment

22. While the NSRA remains our core centralised risk assessment tool, it is not the only government product that helps us to understand the civil contingencies risks we face. Looking beyond the timescales of the NSRA, there are forward-looking projects such as the Government Office for Science's Resilience Foresight project,<sup>12</sup> which identifies long-term governance, economy, social, technology and environmental trends that impact on risk and resilience, while its Trend Deck<sup>13</sup> sets out the broader evidence, trends and context for policy makers. The GO-Science Futures Toolkit<sup>14</sup> and Institute of Risk Management Horizon scanning: A Practitioner's Guide<sup>15</sup> show how trends can be used in foresight approaches to anticipate change and reduce uncertainty. The UK Government will use these tools within our risk and resilience planning to extend our risk horizon scanning and to improve the long-term resilience of government policy. We will also consider the value in making these or similar products available to key resilience partners to support their own risk and resilience planning.

23. The UK Government has many centres of risk assessment expertise spread across departments, agencies and arm's length bodies. One example is the Committee on Climate Change, an independent, statutory body, established under the Climate Change Act 2008 which advises the UK Government and devolved administrations on greenhouse gas emissions targets and climate risks and opportunities. It also monitors progress in achieving UK Government and devolved administration carbon budgets and emissions targets and implementing adaptation policies. We can and will do more to ensure that all these and wider sources of information and expertise are fed into our understanding of risk in a more coordinated and effective way. In addition to the commitments around the NSRA, the UK Government **will work towards sharing risk assessment with partners throughout the resilience system (including those outside of government) as our default position**, accepting that there will still be times when sensitive information will have to remain within government.

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12 [Resilience to long-term trends and transitions to 2050 – GOV.UK](#)

13 [Trend Deck Spring 2021 – GOV.UK](#)

14 [Futures toolkit for policy-makers and analysts – GOV.UK](#)

15 [Horizon Scanning: A Practitioner's Guide](#)

## Risk Ownership

24. The UK Government's ownership model on risk must ensure that all civil contingencies risks are appropriately and effectively managed and funded through all parts of the risk cycle. Effective and clear ownership of risk is not only important in a crisis, but also in planning for and recovering from it. It is vital that the government understands risks, how they might manifest, what impacts they have and which capabilities are available to tackle them.
25. **The UK Government will continue to use the Lead Government Department model to guide risk ownership, but there will be further clarification of roles and responsibilities for complex risks.** Currently, NSRA risks are primarily owned and managed within Lead Government Departments (LGDs), although LGDs must work with a range of departments and regulators to make sure they are well understood, managed and invested in across the risk lifecycle. Additional coordination or support comes from the Cabinet Office at times of crisis, particularly when the impact of a risk crosses sectors or is particularly geographically widespread. This model works well in principle, and in practice, in the vast majority of cases. But there are also limitations of the LGD model, particularly where risks become more complex, meaning that their impacts can cross departmental and sectoral boundaries. For example, the response to COVID-19 demonstrated the challenge for a single part of government leading on an emergency which reached deeply into all parts of the economy and society, and required leadership from all parts of government. Although there was an understanding of the risk of pandemic flu, treating it as a health emergency meant that there was limited planning outside of the healthcare sector.
26. To ensure, therefore, that all risk continues to be fully owned and managed, the UK Government will clarify roles and responsibilities for all NSRA risks. This is not a radical change to the LGD model and will continue to be underpinned by the core principles of subsidiarity and local leadership. However, we will review existing LGD responsibilities, ensure responsibilities are placed with those best placed to discharge them and provide clarity in accountability and responsibility for the small number of risks where ownership is less clear (e.g. where they currently span departments or are cascading risks). This will help the Cabinet Office and departments to support each other more effectively. For many risks, this will simply formalise and complement existing roles and responsibilities for owning risk, however for some risks we may need a bespoke model and for a small number of complex or catastrophic risks we may need a change to roles and responsibilities. This work will not create conflict with other duties or impinge on regulatory independence, particularly risks are owned by a department or Arms Length Body that has regulatory responsibilities for aspects of the risk cycle or for responders and other involved parties.
27. LGDs will continue to be responsible for driving activity across the risk lifecycle, including with other LGDs where relevant, and coordinating across government and partners as needed – particularly when it cuts across departmental boundaries. While good collaboration will continue to be vital, departments will need clear levers to ensure that they can take action.
28. While the LGDs are responsible for ensuring there are adequate plans and capabilities to manage their NSRA risks, as part of our efforts on risk ownership, the UK

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Government will create a new Head of Resilience role to provide leadership for this system. This new role will guide best practice, support adherence to resilience standards, and test planning in a meaningful and proportionate way to support the LGD model. The Head of Resilience will complement the existing role of the National Security Advisor (NSA). The UK Government will ensure that a Head of Resilience will not duplicate or cut across the responsibilities of existing senior officials or LGDs but will provide leadership for the system. They would also not cut across the responsibilities of the devolved administrations, but would work with them in partnership.

### Risk Communications

29. Working out how to appropriately tailor risk communications and the sharing of information on risk is complex. In some cases it can be important to share information in a broadly consistent way across all groups, in other cases different partners and groups will need different information about different risks. Similarly the levels of detail that will be needed or expected will vary. As an example, large corporations may need detailed and technical advice on cyber security, but this advice would be of no practical use to most individuals, who would be better served by general advice on good online security behaviours. Specialist advice is already available for many sectors and organisations. For example, the Emergency planning and response for education, childcare, and children's social care settings guidance<sup>16</sup> sets out how educational and childcare settings should plan for and deal with emergencies, and focuses on minimising the amount and length of any disruption to education or childcare.
30. Government communications on risks should draw on evidence-based principles for communications in an emergency; be transparent, accessible, diverse in platform, and tailored for the diverse audiences that we need to reach; as well as being designed in consultation with different socio demographic, vulnerable and at-risk groups who will require tailored approaches. They should also draw on 'trusted voices', recognising that those partnerships are often the best way of reaching audiences.
31. The UK Government will improve its communication of risk, focussing on personalisation (for organisations and individuals) as a means to ensure that organisations and individuals have access to relevant, actionable information. We will work closely with both national and local partners to develop and deliver these messages, as well as supporting partners to develop and deliver their own communications campaigns. The UK Government will not only communicate about the risk itself, but also the impacts of the risk so people better understand what they may actually see or experience, and the action that people can take to protect themselves and their communities. The UK Government will also be clear about the reasons why government cannot be transparent in discussing all risks, such as for reasons of commercial sensitivity or national security.
32. Vulnerable and at-risk groups and communities are often most impacted by risk materialisation, as seen in the current rise in the cost of living. The UK Government will develop appropriate communications on civil contingencies risks for disproportionately affected populations, engaging with these groups to better understand their barriers

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16 [Emergency planning and response for education, childcare, and children's social care settings – GOV.UK](#)



to action and developing co-produced materials for use in risk planning and response. Working with local and national partners and those in these communities will be crucial to this. Developing tailored communications will also include how to avoid stigmatising particular communities. To support the UK Government's risk communications and ensure they are appropriately targeted, the UK Government will conduct **an annual survey of public perceptions of risk, resilience and preparedness** that uses a representative sample of the population. This will ensure the risk communications strategy is built on an understanding of how aware the public is of the risks we face and how prepared they are for emergencies.

33. The UK Government will increase public accountability on risk, to ensure that risks continue to be adequately assessed and prepared for. This will start with the introduction of an **Annual Statement to Parliament** on civil contingencies risks and our performance on resilience. This Statement will include the government's understanding of the current risk picture, performance on resilience and current state of preparedness. This will represent a shift in our transparency on risk, and will complement the more technical risk information provided to practitioners. It will also provide a public baseline for work on civil contingencies across the public and private sectors.
34. The UK Government will develop proposals to make our communications on risk personalised, and more relevant, actionable and easily accessible. Currently, advice from the UK Government on specific risks is available through a range of gov.uk pages which are successful in their own right, but are not necessarily easily accessible beyond their defined target audiences and do not give a holistic view when considering whole-of-society risks. UK Government departments also deliver communications campaigns on the risks that they own. For example, the FCDO's *Travel Aware* campaign provides easily accessible and dynamic travel advice, and its reach is increasing annually. However, this means that organisations and citizens who are not already formally part of the resilience system, or are not proactively searching for information on a risk, may find it difficult to access the information that is useful to them.
35. Making advice on risk more directly accessible to the public will not only improve the visibility of information on risk, but will also include an element of personalisation so that individuals, households and organisations have actionable information on how they can prepare for the risks that might impact them. There are already some examples such as *Ready Scotland*,<sup>17</sup> a Scottish Government website, providing relevant and actionable information for citizens and businesses in Scotland.
36. The **National Risk Register (NRR)** remains an important way for the government to communicate about risk with resilience practitioners. The NRR is the publicly available counterpart of the NSRA, aimed at providing detailed information for those with formal contingency planning responsibilities at a national and local level. The UK Government will reform the NRR, and include more information from the NSRA to make it more useful to practitioners and ensure this product is shared proactively with them and the wider public. The UK Government will also ensure the NRR is usable by local resilience partners, Small and Medium-sized Enterprises and community VCS

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17 [Ready Scotland](#)

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organisations, by better detailing the common types of disruption that could impact their business continuity.

37. The National Risk Register is complemented by **Community Risk Registers (CRR)**, which are produced by the local tier. CRRs are based on the NSRA, risk assessments in the devolved administrations (such as the Scottish Risk Assessment and the Northern Ireland Civil Contingencies Risk Register), and the NRR, but focus on the risks that are the highest priority in each local area. The production and use of CRRs is the responsibility of local resilience partners (including LRFs). However, as set out in the *CCA Post Implementation Review 2022*<sup>18</sup> and as part of the wider strengthening of LRFs in England, the UK Government will strengthen the requirements around the production of the CRR so that responders consider community demographics, particularly vulnerable groups. As a first step, the improvements made to the NSRA and NRR should in turn make CRRs more dynamic and better aid local contingency planning. The UK Government will continue to review how it can support local responders to better communicate risks to the communities they serve and to tailor communications.

### Using data to better embed risk in decision making

38. The UK risk picture is constantly changing. Modern technology means that we are better able to keep up, and to gather, analyse and visualise vast amounts of data to better understand and protect our vulnerabilities and identify how and where civil contingencies risks may manifest. It is important that decision-makers and experts have access to the right information at the right time during an emergency. This requires us to continue to improve our understanding of data flows, ownership, and interoperability as part of our preparedness. But quality matters as much as quantity, and the UK Government will continue to make improvements in the data and analysis that supports our decision making on risk, in advance of and during a crisis. The UK Government will also use external experts to test and challenge thinking on risk and resilience (more detail in the *Partnerships* chapter).

### The National Situation Centre

39. The National Situation Centre (SitCen) within the Cabinet Office has been established to bring data, analysis and expertise together for crisis management. Announced as part of the *Integrated Review*,<sup>19</sup> and drawing upon lessons learned from the COVID-19 pandemic, the SitCen has accelerated the UK Government's journey of modernisation and use of data and wider information and insight. The UK Government will continue to deliver a step change in the use of data to assess risk and support the UK Government's crisis response. By continuing to develop the National Situation Centre, we will continue work in proactively identifying, monitoring and managing risks. Framed around the NSRA, the SitCen brings together expertise and a range of government, international, local, national and commercial data feeds to provide a holistic picture. The unique value of the SitCen is its ability to understand the intersection of multiple risks

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18 [Civil Contingencies Act 2004: post implementation review report \(2022\) – GOV.UK](#)

19 [Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy](#)

and provide insights at pace due to its preparatory work and automated data pipelines. Key to this is the SitCen's data map, which can visualise how data feeds, risks and impacts interact.

40. The SitCen started operating on 30 September 2021 and has already made a step change in the speed at which data is drawn together, analysed and made available across the government. During the UK Government's response to Russia's invasion of Ukraine in early 2022, the SitCen acted as a central point for data, insights and analysis on international, national security and domestic implications.
41. A focus on continuous capability development and innovation is core to SitCen's future evolution. In terms of internal systems, greater automation is a near term goal, leading to use of machine learning techniques to create models capable of testing, refining and expanding linkages between data sets, which may ultimately pave the way for the creation of digital replicas of the real world, known as digital twins or synthetic environments. Looking more broadly it is important that we consider the wider systems in which we operate and the partners who both act as key sources of data and information and who may come to be key users of outputs and analysis. Our ambition is to be able to draw in relevant data points from across the private and public sector, including Local Resilience Forums in England where we will support them in building their capacity and capability as a key part of their strengthening.
42. This is underpinned by the SitCen's data strategy, which maps public and private sector data against the NSRA risks. This supports more effective and rapid deployment of data during crisis response, as well as improving resilience by identifying and addressing data gaps. The SitCen regularly convenes a cross-government network of crisis data experts to support this, and to promote resilience through best practice for using data in crisis response.

### Social Vulnerability

43. With the UK facing an increasingly complex risk landscape, it is critical that the UK Government is able to fully utilise all available information both before and during crises. If we are to improve resilience across the whole of society and make targeted interventions during crises, we must ensure we understand which groups are acutely vulnerable to local and national risks.
44. Improving the use and sharing of data, analysis and insight will allow us to improve our understanding of how different groups and communities might be affected by emergencies and give planners and responders the information they need to understand and serve their communities at all stages of the resilience cycle.
45. The UK Government has always known that risks do not impact communities equally across the UK for a wide variety of factors. Recently, we have seen that the impacts of COVID-19 had a disproportionate impact on ethnic minority and low income groups. Plans and preparations must reflect this and enable us to better plan, prepare, respond and recover from crises.
46. To support that, the UK Government, with input from Local Resilience Forums in England and wider partners, will **develop a measurement of socio-economic resilience** and vulnerability to key civil contingencies risks, including how civil

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contingency risks and emergencies impact across communities and vulnerable groups, to guide and inform decision making on risk and resilience. This measurement will need to be driven by a nuanced view of vulnerability and the factors that can cause vulnerability, and will be informed by behavioural and social science evidence. This tool will use new and existing data to **provide a snapshot of the key characteristics of local areas**, and build the evidence base on how risks and emergencies have impacted across communities and vulnerable groups and assess where there may be particular vulnerabilities to civil contingencies risks. The devolved administrations will also be encouraged to participate where beneficial. The tool will:

- Support the UK Government LGDs in understanding **how the implications of their risks materialising will impact communities differently** and ensure that their prevention and planning takes into account these differentiations.
- Offer a key tool in **developing targeted communications strategies** and offer a degree of personalisation in the risk information available to the public.
- Be **an open tool that LRFs in England and the wider local tier and voluntary and community sector** will be able to use to support their own work.
- **Enable stress-testing of national (LGD) contingency plans** and be able to add depth to exercising through the National Exercise Programme (see *Skills* chapter).

### Applicability across the UK

Some of the actions proposed in this, and the following chapters, will be the responsibility of the UK Government, some will be the joint responsibilities of the UK Government and the devolved administrations, and some wholly the responsibilities of the devolved administrations. At the time of publication, it is anticipated that:

- The DAs will remain involved in the production of the NSRA, and will continue to use it to inform their own activity.
- The principle of risk transparency is shared with the DAs, but for specific products the decision on transparency will sit with existing owners.
- Changes to risk ownership and governance within the UK Government will not directly change any arrangements inside the DAs, although the UK Government will be mindful of any adjustments needed in working practices as a result of these internal developments.
- The Annual Statement to Parliament on civil contingencies risk will be produced by the UK Government, and will cover risks that impact reserved competencies and international risks. In this context, it will refer to joint working with the DAs on these risks.
- Improvements to risk communications will be developed by the UK Government and will be accessible to residents in all four nations. These will also draw on advice provided by the DAs.
- The proposed measure of Social Vulnerability will draw on ONS data covering all four nations and will be an open tool, accessible to the DAs. The UK Government would welcome additional data from the DAs.

PLAN AHEAD  
STAY SAFE  
SAVE LIVES

## Our action plan: **Responsibilities and Accountability**

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On responsibilities and accountability, we are already taking action by:

Strengthening UK Government resilience structures by creating a new resilience function to deliver longer term capability building and risk mitigation to work alongside the UK Government's crisis management infrastructure.



By 2025, we will:

Expand the scope and use of standards and assurance in the public sector to support better contingency planning and risk management.

Run a pilot across three key pillars of reform to significantly strengthen Local Resilience Forums (LRFs) in England: Leadership, Accountability, and Integration of resilience into the UK's levelling up mission.



By 2030, we will:

Expand the scope and use of standards and assurance in the public sector to support better contingency planning and risk management.

47. The approach to resilience within the UK public sector is driven by the efforts of UK Government departments, arm's length bodies and agencies, devolved administrations, local authorities, LRFs and a wide range of responders. The extensive efforts of the private and voluntary and community sectors are covered in the *Partnerships* chapter. In planning, preparing, responding and recovering from emergencies it is essential for each part of the system to understand their role and specific responsibilities.
48. Our strategic approach will continue on the basis of where responsibility and accountability lies in the system, but this framework will further clarify and develop the roles and responsibilities of the UK Government, LRFs and the wider Local Tier, all Category 1 and 2 responders and the Military. In some cases this framework outlines new or strengthened roles and responsibilities and makes those accountable for resilience more visible to local communities. The responsibilities of the devolved administrations in resilience will remain unaltered, but the UK Government will continue to support a strong and clear understanding throughout the resilience system of the vital role that the devolved administrations play in the UK's resilience. The framework underpinning UK resilience is the Civil Contingencies Act (CCA) 2004 and this together with clearer expectations will enable all parts of the system, across the whole resilience cycle, to work together with renewed clarity and confidence.

## UK Government

49. The UK Government will continue to provide leadership across the resilience cycle, but its responsibilities will be clarified and, in some cases formalised, to provide clarity to other partners. The Lead Government Department (LGD) model will continue to guide responsibilities on resilience, as covered in the *Risk* chapter. The devolved administrations will continue to lead on devolved areas of resilience policy and practice.

## Crisis Management in the UK Government

50. We will significantly overhaul UK Government resilience structures to ensure that we can draw on world class capabilities and resources during an emergency, whilst in parallel delivering longer term capability building and risk mitigation. This will ensure that we have dedicated resource across the risk cycle from assessment, prevention and preparation to response, recovery and lessons capture.
51. Throughout numerous domestic and international crises – the Salisbury attack, the Russian invasion of Ukraine, terrorist attacks, and floods – the UK Government has proven its ability to quickly stand up a world class response. However, this range of recent emergencies has naturally tested our existing arrangements. While we have been able to successfully provide an effective response, there is no room for complacency. We need to continue to build our collective resilience, bolstering our existing strengths and preparedness and continue to strengthen our ability to anticipate, prevent, prepare, respond and recover from emergencies.
52. To do this, we have refocused our work on prevention and preparation by creating a dedicated function for resilience, the Resilience Directorate, to focus on the prevention and mitigation of both acute and chronic risks rather than only dealing with the consequences of crises.

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53. The new Resilience Directorate sits at the heart of UK Government and takes a strategic approach to economic and societal resilience, overseeing how we are tackling both acute and chronic risks in order to make the UK a stable and safe place to live and work. It drives the implementation of the measures set out in this framework and also works across government to develop a programme of action to bolster critical cross cutting capabilities, building on successful work to date such as supply chain resilience. It gives the UK Government the opportunity to properly focus on major challenges, anticipating and properly preparing for the crises of the future..
54. The new Resilience Directorate works alongside the UK Government's crisis management infrastructure, which has been developed over many years, and is highly regarded internationally. This separate crisis management function – COBR Unit – leads the UK Government's response to acute emergencies and drives further professionalisation of emergency management in government. Delivery capacity and capability will be uplifted by crisis teams and resources that are composed of crisis professionals, with the time and resource to prepare and exercise their capabilities, to ensure that they can respond whenever needed. Key to this is the need to make sure that while the Cabinet Office must have the right crisis structure, ownership of risk and crisis roles must also be clear between departments. The new approach to risk ownership outlined in the *Risk* chapter will be part of this ongoing management of risk within government, but our new crisis structures also makes sure that this ownership is reflected in protocol and responsibilities during an emergency.
55. The UK Government will **continue to invest in our crisis response infrastructure** at the centre of the UK Government, to maintain the momentum of improvements in the use of data and technology, alongside maintaining the necessary security to protect discussions appropriately. The system is designed to be flexible and has been repeatedly adapted to meet a changing risk landscape with subsidiarity at its core. The UK Government Concept of Operations (CONOPs)<sup>20</sup> describes the UK response model and this will be updated to reflect this framework shortly after publication. The Cabinet Office Briefing Rooms (COBR) remain the key mechanism through which the UK Government responds quickly to emergencies that require decisions urgently. A resilient environment for strategic decision-making during crises, COBR brings people together to respond to domestic and international emergencies affecting UK interests. The UK Government has already launched a new National Situation Centre in 2021 to enhance our data analysis and visualisation capabilities. The UK Government also brought a series of planned infrastructure improvements in COBR into service to better support decision making discussions.
56. The UK Government will continue to maintain a number of specialist central crisis management capabilities, across the command, control and communications (C3) spectrum. A current example of this is the Resilient Satellite Network (RSN) which provides an alternative form of communication during a scenario when terrestrial communication has been disrupted. The system is placed in Police HQs, certain UK Government departments and Civil Contingency offices across the four nations. Consequently, the system ensures stable communications with those who lead crisis response in the most challenging scenarios.

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20 [The central government's concept of operations – GOV.UK](#)



57. The UK Government will shortly introduce a new system of Emergency Alerts. This system is already used internationally, and is expected to launch in early 2023. It will allow government organisations and emergency responders to send alerts, with a distinctive message appearance and tone, to every compatible mobile device (over 85% of 4G/5G smartphones released since 2015) within a chosen geographical area at very short notice (typically seconds), providing a highly flexible capability for informing and where appropriate prompting rapid action from the public in the vicinity of a life-threatening incident. Their key attributes are speed of delivery and versatility – they can be used in any life-threatening situation where the public need to be given life-saving information.

### Formalising UK Government Departments' Responsibilities

58. There are excellent examples of partners throughout the system working together openly and seamlessly during an emergency, but too often we have found that this is dependent on individuals or informally agreed ways of working. While this can be effective, we need greater assurance that we can depend on vital links between local and national partners working effectively. For most parts of the resilience system there are duties to set expectations about how essential parts of the system carry out their roles to the necessary standard, which in turn ensures that the system as a whole can function.
59. The UK Government should not be an exception to this. One of the functions that UK Government departments must carry out is to effectively share appropriate information with the local tier. While some information is sensitive and this should continue to be protected, there is more we will do to share information about risk with all our partners. But supporting and guiding contingency planning in local areas goes beyond just sharing aspects of the NSRA. At any point in an emergency – whether it is as a risk is starting to materialise, or when recovery efforts begin – it is essential that the local tier is able to access the information it needs in order to make informed local decisions. Too often, we have heard that the UK Government is slow to keep local responders informed in an emergency, which hinders efforts on the ground.
60. **The UK Government will consider a range of options for improving this and develop an action plan to deliver these**, including by developing proposals for formalising duties on UK Government departments, particularly in respect of working with Local Resilience Forums and wider local responders in England on resilience across the whole resilience cycle. Any new duty would be subject to an impact assessment, to ensure that it did not place a counterproductive burden on the UK Government department and would not alter the fundamental roles of either the UK Government or the devolved administrations on resilience.
61. In addition, as part of a renewed effort to improve working between the UK Government and local partners, all UK Government departments must make sure that they have appropriate fora and mechanisms for working with local responders, and that all guidance is up to date and effective.

### The Local Tier & Local Resilience Forums

62. The multi-agency work across planning, preparation, response and recovery at the local level will continue to be the building block of the UK's resilience. All risks and emergencies and their impacts are local; only some are regional or national. The 38 Local Resilience Forums (LRFs) in England, the four LRFs in Wales, three Regional Resilience Partnerships (RRPs) in Scotland and Emergency Preparedness Groups (EPGs) in Northern Ireland play a critical role in bringing local responders, such as the emergency services, together to plan and prepare for emergencies. They are supported by the common framework for multi-agency working provided by the CCA drawing together individual Category 1 and 2 responders.<sup>21</sup>
63. In England, the LRF multi-agency model plans and prepares for risks and emergencies; leads multi-agency response and recovery activity through the standing up of Strategic Coordination Groups and Recovery Coordination Groups; and coordinates support for communities. The recent Post Implementation Review of the CCA<sup>22</sup> made clear that the core principles of subsidiarity and local leadership remain critical. However, we must recognise that expectations and pressures on local resilience structures have grown significantly over recent years, and that this is unlikely to change in the future.
64. The UK Government remains fully committed to working closely with the devolved administrations to ensure integration of respective approaches, share best practice and learning, and ensure strong cross-border collaboration – delivering on our duty to protect citizens in every part of the UK. The devolved administrations have their own established and effective local resilience partnerships, and these will not be impacted by the planned strengthening of English LRFs.
65. Building resilient places and communities will be critical in our mission to Level Up and drive growth across the United Kingdom. Risks, emergencies, and disruptive events can damage local economies and limit new investment, reducing the potential of areas to take advantage of the opportunities of levelling up and the new global Britain. We also see that disruptive events can affect different areas in different ways, with the most vulnerable often the most severely affected. Empowering local areas and communities to build their resilience, including providing appropriate additional support to the most vulnerable, will enable our places and communities to be better prepared and able to respond to and recover from emergencies. This in turn has the potential to reduce the overall impact, disruption, and cost of adverse events, as well as reducing key vulnerabilities in communities and places.

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21 Category 1 responders are organisations such as the Local Authorities, the Police Force, Fire and Rescue Service, Ambulance Service, some NHS bodies, Environment Agency and Maritime and Coastguard Agency. Category 2 responders are organisations such as Electricity and Gas Network Operators, water and sewerage undertakers, telephone service providers, railway, port and airport operators and the Health and Safety Executive.

22 [Civil Contingencies Act 2004: post implementation review report \(2022\) – GOV.UK](#)

## The ambition for change in England

66. In recognition of the central, and growing, role of LRFs and to ensure that all parts of England can anticipate, prevent, prepare for, respond and recover from risks and emergencies, the UK Government will work to **significantly strengthen LRFs**. There are three key pillars to this reform: Leadership, Accountability, and Integration of resilience into the UK's levelling up and growth mission and wider local policy and place making. Recognising the scale of this change, the UK Government will work closely with the sector and begin with a programme of piloting and trailblazer projects.
67. The aim is to empower LRFs, local partners and local leaders to consider, drive and improve resilience across the places for which they are responsible. They will be given a clear mandate to support the building of more resilient communities and places that are best able to adapt and respond to, and recover from risks, emergencies and disruptive events and to take full advantage of the opportunities of levelling up. This will include identifying those communities most vulnerable to key risks and addressing these vulnerabilities to build their resilience.

## Leadership of LRFs in England

68. As the role and expectations on LRFs have grown to meet the varied challenges of recent years, so too has the role of LRF Chairs. For many years LRFs have been led to great effect by committed senior leaders drawn from a variety of responder organisations, including the Police, Fire Service and Local Authorities. This has typically been as part of a wider role within their organisations that included a range of other duties and responsibilities. The UK Government will work with LRFs and their members to **ensure LRF leaders have the resources, capacity, and capability to sustain this work** as they engage with an ever more challenging risk landscape and drive resilience in their areas.
69. It is critical to the success of LRFs that senior leaders from the organisations outlined in the CCA and beyond continue to take a key leadership role in the work of LRFs. It is equally vital to ensure that LRF Chairs have the capacity and capability to lead LRFs in delivery of the strengthened roles and responsibilities we are proposing. They will need the time and space to fully embed themselves and their LRFs in wider local structures – including working in close partnership with locally elected democratic leaders and the full range of senior leaders across local government and responder organisations. To best enable this, **the UK Government will work with the sector to pilot evolving the nature of the LRF Chair role, including considering a full time permanent role occupied by an appropriately qualified and experienced individual who will become the Chief Resilience Officer (CRO) for each LRF area**. The LRF CRO should be provided with the resources, support, mandate and levers to bring together the full range of partners to drive and enhance resilience in their areas and we will work with the sector to consider how best we can do this. The LRF CRO will be distinct from the UK Government Head of Resilience role discussed in the *Risk* chapter, with both having complementary leadership roles across the resilience system.
70. The UK Government will set clear expectations for LRF Chief Resilience Officers to lead the building of resilience and delivery of resilience activity in their areas and **they will be accountable to executive local democratic leaders**. This will **give these democratic**

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**leaders a clear role in ensuring effective delivery of resilience activity, including integrating resilience into wider local delivery** and levelling up.

71. As set out in the 2022 Post Implementation Review of the CCA,<sup>23</sup> at present the fulfilment of the duties of the Act by Category 1 and 2 responders remains fit for purpose. However, we recognise that the evolving risk landscape, and the ambition to strengthen LRFs in England may require future consideration and may necessitate future changes to underpinning legislation and regulatory frameworks.

### Accountability for LRFs in England

72. **Strengthening the accountability and assurance across LRFs** in England will ensure local leaders have key tools to drive the building of resilience and multi-agency collaboration in their communities. **Clear mechanisms and expectations for accountability between LRF Chief Resilience Officers and executive local democratic leaders** will make LRFs more accountable to the communities that they serve and provide a mechanism for **local communities to hold local leaders to account for driving and delivering resilience**.
73. To support this, we will consider the best way to develop a means of stronger assurance of LRF collective delivery in England, including auditable frameworks, to set and drive standards and support local places to develop their resilience whilst providing assurance of levels of resilience across the LRF system and England as a whole. We will build the assessment of resilience activity into the inspection and audit regimes of individual responders, working closely with the relevant assurance and inspection bodies. **Alongside this we will establish clear mechanisms for the assurance of the multi-agency activity at LRF level.** This will give local leaders new information and tools to understand the impact of their work, identify areas for improvement or mitigate risk or vulnerability by targeting resilience activity.
74. The introduction of new assurance activity will contribute to continuous improvement in emergency management, provide further opportunities to celebrate and share good or best practice and crucially address emerging risk through early mitigation measures or prevention activity. Alongside this it will enable the UK Government to consider the level of support that may be required (before, during or after an emergency) to assist the local level at any stage of the resilience cycle.

### Integration of Resilience into Local policy and place making in England

75. The UK Government needs to build a solid foundation of resilient communities and places, drawing on the full range of national and local levers. This means **placing resilience at the heart of levelling up and wider place making**. This will ensure that all areas can take advantage of the opportunities this affords, tackle key vulnerabilities, and minimise the potential for risks and emergencies to stop areas achieving their full potential. The UK Government will **empower the new LRF CRO and the local elected leaders work across the full range of local policy making and delivery** to make the

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23 [Civil Contingencies Act 2004: post implementation review report \(2022\) – GOV.UK](#)

building and delivery of resilience central to wider place making, including other key policy areas such as Net Zero and Build Back Better.

76. **Resilience will be included as a key aspect of the local devolution deals in England** being delivered as a part of levelling up, with local areas taking formal responsibility for building and delivering local resilience. The UK Government will work with areas not preparing a devolution deal **to integrate resilience into wider delivery** including, as appropriate, working with Police, Fire and Crime Commissioners to make resilience the third strand of community safety. Alongside this we will consider the case for making Combined Authorities and Mayoral Combined Authorities Category 1 Responders.
77. The UK Government will encourage and facilitate stronger collaboration between regions and across the four nations to maximise the opportunities for shared learning, insight, and cooperation. Similarities between areas are not just geographical and we will link places, even if they are at opposite ends of the country, to share good practice.
78. The UK Government will work with LRFs to strengthen data, intelligence and analysis capacity and capability. This will support them to make the best use of data to target activity and measure success as well as being a vital tool in response and recovery. Central to this will be ensuring appropriate sharing of UK Government data and information and building strong links with the National Situation Centre.

## Civil Contingencies Act 2004 and Emergency Powers

79. Emergencies can require quick action, and they require powers to allow us to take that action. They require government, responders and businesses to work with partners in a way that they would not normally. When dealing with crises, actual or potential, it is vital that we have the powers we need to take decisive action.
80. The Civil Contingencies Act (CCA) 2004 will continue to be the legislative basis for the UK's resilience frameworks.<sup>24</sup> The CCA sets out a framework for emergency preparedness. It provides a definition of 'emergency', sets out arrangements for multi-agency working at the local level, and provides emergency powers to allow the UK Government to make temporary legislation in the most serious of emergencies. The Act is made up of two parts:
  - Part 1: local arrangements for civil protection, establishing a statutory framework of roles and responsibilities for local responders.
  - Part 2: allows for the creation of temporary special legislation in an emergency without prior parliamentary scrutiny.
81. Under the CCA, there are two groups of responders that have defined responsibilities. Category 1 responders are those that have a statutory duty to plan for emergencies and put those plans into action when an emergency occurs. Category 2 responders

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24 In Northern Ireland the CCA currently only applies to the PSNI and MCA as Category 1 responders and certain telecommunications operators as Category 2 responders.

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are obliged to cooperate with and share information with local responders to aid planning activity.<sup>25</sup>

82. The CCA was subject to statutory review in 2022, and this review recommended some amendments to primarily Part 1 of the Act and found that Part 2 remains fit for purpose with no need for fundamental alterations. The review identified three areas in which the Act should be further strengthened.
83. Firstly, there is a need for enhanced accountability for the multi-agency preparedness activities conducted by local resilience arrangements. To support this, the UK Government will clarify the statutory and non-statutory guidance around accountability where these components come together in the planning and emergency response stages. New methods for accountability and assurance for resilience will continue to be considered as part of the measures to strengthen LRFs.
84. Secondly, while the CCA sets out expectations on responder organisations clearly, it does not ensure adherence to those expectations. As part of the wider strengthening of the roles and responsibilities of LRFs, the UK Government will consider putting the Resilience Standards that apply to responder organisations in England onto a statutory footing, and will require categorised responders to publicly state how they are meeting their obligations under the CCA. An impact assessment will be done as part of those considerations to ensure no counterproductive burden is placed on responders.
85. Thirdly, the definition and scope of Category 1 and 2 responders (see above) remain effective, and there is not yet a case for expanding or changing the duties of either category. However, the statutory review of the CCA recommended adding two new Category 2 responders (the Met Office and Coal Authority). Likewise, as part of the wider strengthening of LRFs we will look at strengthening the requirement to produce a Community Risk Register (CRR) to require responders to consider community demographics (particularly vulnerable groups) in preparing and communicating their CRR, to further consider how emergencies impact on communities.
86. The review also recommended bringing the legislation up to date with current local responsibilities. The role of the Regional Nominated Coordinator in England, originally added to the Act to aid coordination, will be removed. Instead, we will focus our efforts on working through existing local structures and reporting mechanisms.
87. **The emergency powers under the CCA remain fit for purpose.** The primary conditions placed on their use need to be maintained to prevent misuse of the power and ensure that, wherever possible, any legislation required to respond to an emergency goes through Parliament in the normal way. The UK Government has shown we can introduce emergency specific primary legislation to tackle risks but we will consider the need for new non-legislative options to ensure we can act effectively in an emergency.
88. The UK Government will continue to use **sector-specific legislation** to tackle risks, as they develop and after they have become emergencies, maintaining the CCA powers as an important option of last resort.

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25 [Civil Contingencies Act – Category 2 Responders: overview of sectors and emergency planning arrangements](#)

## The Devolved Administrations

89. All four nations of the United Kingdom share the same goal – to protect our citizens from the impacts of crises. Resilience encompasses both reserved and devolved matters. This means that some elements of the resilience system are overseen by the UK Government and it is important that the UK Government works in partnership with the devolved administrations (DAs) as reserved issues may impact devolved responsibilities. Significant elements of resilience are wholly the responsibilities of the devolved administrations.
90. Crises do not always fall neatly within the boundaries between the four nations of the UK and all four nations have their own Administrations, their own local structure and resilience partners, and their own emergency services. The resilience system must respect these differences, whilst making sure that when crises do spread across the UK every part of the system can come together to tackle it. The UK Government is committed to working in partnership with the devolved administrations to implement change across the four nations where appropriate, to ensure that citizens in every part of the UK are protected from crises.
91. Where they have responsibility, the **devolved administrations will continue to drive resilience activity in their nations, and in partnership with the UK Government, where it has responsibility wherever appropriate.** Whilst much of resilience is devolved, we can derive great collective strength and resilience from fostering and building on strong joint working and mutual support. This can range from the active sharing of new ideas to enhanced protocols for cross border and cross-regional support in times of heightened risk or when responding to or recovering from emergencies. We also recognise that similarities in areas are not always bound by the nearest neighbour and we will link places that reflect the local picture even if they are at opposite ends of the country to share good practice.
92. In order to maximise cooperation on a four nations basis, there will be periodic ministerial level meetings on resilience, informed by quarterly senior official quad meetings and regular official-level contact, as part of a joint governance process.

## The Armed Forces

93. Over the last few years, the armed forces have become one of the most familiar public faces of an emergency. In addition to its primary role of protecting the UK, its citizens and interests, the military can also contribute to domestic resilience through MACA (Military Aid to the Civil Authorities), allowing civil authorities to request military aid during crises. Under this process, they have driven ambulances, rescued households from floods, administered vaccines and much more. The military can provide essential specialist skills and deploy a volume of personnel at short notice across the UK. But the Armed Forces are facing pressure as risks multiply and diversify both at home and overseas, and they cannot be the first port of call whenever an emergency hits. **The armed forces will continue to play a vital supporting role to the civil authorities in resilience, but will not be asked to take on an enhanced role.**
94. Record numbers of personnel have been deployed on MACA operations in recent years, with approximately 34,000 servicemen and women (about 21% of the UK's

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Armed Forces) deployed to support the UK pandemic response. However, alongside the increase in demand for MACA, the re-posturing of Defence and the need to meet increased persistent overseas threat means that requests for military assistance will need to continue to meet a high bar for authorisation. Utilising the Armed Forces in domestic resilience tasks comes with a cost: both financial for the requesting UK Government department or Devolved Administration, and to the Armed Forces in the military capability diverted from its primary role of protecting the UK's national interests.

95. The UK Government will continue to work towards maximising the effectiveness of civilian organisations, with a view to reducing reliance on the Armed Forces. Therefore a more strategic application of MACA will be required in the future as requests for MACA should be an instrument of last resort<sup>26</sup> and only used when:
- There is a definite need to act and the tasks the Armed Forces are being asked to perform are clear;
  - Other options, including mutual aid, commercial alternatives and the voluntary sector have been discounted;
  - The civil authority lacks the necessary capability to fulfil the task and it is unreasonable or prohibitively expensive to expect it to develop one; or
  - The civil authority has all or some capability, but it may not be available immediately, or to the required scale, and the urgency of the task requires rapid external support from the MOD.
96. The military will remain an ultimate guarantor of national security and resilience in emergencies, however, utilising our Armed Forces for non-emergency, routine tasks where the military do not play a specific and defined role should be seen as an indication of policy failure, inadequate resilience planning or chronic underinvestment. There will be a shift to deliver some MACA through locally-based Reserves and the UK Government will retain existing MACA thresholds and encourage adherence to them.
97. Reserve service personnel already participate in the full spectrum of the UK Armed Forces, including recently in operations in support of the UK Government's COVID-19 response. In the future, as a part of Defence's Integrated Operating model, it is envisaged that the Reserves will play a greater role in resilience operations and MACA. Key to this will be an enhanced relationship between Defence and the employers of Reservists who may be asked to release them for military duties at shorter periods of notice.

## Standards and Assurance

98. Good assurance, based on commonly understood standards across the public sector, can help to ensure that work across the resilience sector will have a positive real world impact. The UK Government will **expand the scope and use of standards and assurance across the public sector in England and develop an action plan to deliver this**, to support continuous improvement in risk management and

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26 [As defined in the Joint Doctrine Publication 02.](#)



preparedness. Although this approach needs to be flexible according to the needs of the sector, without meaningful, robust and standards-based assurance, risk-owning principals, stakeholders and potentially affected parties have no reliable way of knowing whether capabilities and arrangements to respond to risks and impacts are effective. This approach will be supported through an enhanced offer on skills and training, to help all those working on resilience to meet these standards.

99. There are some existing standards and frameworks in England at national and local levels in relation to specific risks and resilience capabilities. For example the National Resilience Standards for LRFs<sup>27</sup> set out expectations of good and leading practice for LRFs, which build on and complement statutory duties under the CCA and other relevant legislation, however there are no current mechanisms for more formal assurance against these standards. More broadly some sectors are regulated and some organisations are inspected but others are not, so arrangements are not complete or coherent at the system level.
100. The UK Government will adopt a **standards-based approach to assurance and develop an action plan to deliver this**, setting out what organisations, partnerships and networks should do, should have and should be able to do in order to manage risks effectively, including those within the NSRA, and competently respond to and recover from emergencies arising from those risks. This will introduce greater rigour, provide greater consistency and transparency in assessments, and enable continuous improvement through identifying lessons to address and good practice to build on. To support this, the UK Government will build upon existing structures to develop **assurance frameworks** that will span departments and agencies, national and local resilience capabilities and arrangements, and encompass Critical National Infrastructure (both public and privately owned) and essential services.

## Recovery

101. Recovery is a key stage in the resilience cycle and can have an important role in catalysing regeneration, renewal and future prevention in the aftermath of an incident. Whilst recovery is woven across all areas of the resilience system, there are some additional specific actions that will be taken.
102. Strengthened LRFs and their partners in England will continue to have a central role in the planning for and delivery of recovery activity. Working with the VCS and communities they will put plans and protocols for recovery activity in place and will work with these same stakeholders to deliver recovery activity should incidents occur. This includes ensuring the needs and views of communities are fully considered and understood.
103. The UK Government's LGDs will take responsibility for the provision of clear guidance across government and to LRFs and wider partners on considerations for recovery related to their risks, ensuring appropriate advice and support are available should they be required. This will sit alongside a refreshed set of national recovery standards and updated National Recovery Guidance.<sup>28</sup>

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27 [National Resilience Standards for Local Resilience Forums](#)

28 [National Recovery Guidance – GOV.UK](#)

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104. As an initial measure, **the UK Government will also offer guidance to the local tier on how mental health and psychosocial awareness** can be intrinsically factored into recovery work, to support those affected beyond their physical needs.
105. It is absolutely right that UK Government funding is targeted where the highest impact will be made, including investing more in prevention and preparation. It will always be the case however that emergencies will continue to happen. Where communities are impacted by emergencies the default remains for this to be managed locally, however in exceptional instances the UK Government may intervene to provide additional support and coordination.
106. At present financial assistance for recovery activity is usually agreed on a case-by-case basis. To ensure consistency for our partners, and building on the example of the Flood Recovery Framework,<sup>29</sup> we will seek to provide greater clarity and guidance on when and how the UK Government may intervene, and consider if more formal arrangements should be developed to cover recovery from wider risks.
107. We will strengthen the evidence base on recovery, including developing tools for measuring and assessing the efficacy of recovery interventions. Building on this we will aim to enhance our understanding of what works in supporting communities to manage and recover from the impacts of emergencies to inform future policy development and planning.

### Applicability across the UK

At the time of publication, it is anticipated that:

- Any statutory duty considered for UK Government departments will not apply in the devolved administrations.
- The proposed strengthening of Local Resilience Forums will only apply to LRFs in England.
- The expanded use of assurance and standards will apply to England and to reserved sectors across the UK. The UK Government and devolved administrations will work together to ensure that approaches are aligned.
- The scope and applicability of the CCA will remain the same. Any new sector-led legislation will be led by the UK Government, in consultation with the devolved administrations on a case-by-case basis.

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29 [Flood recovery framework: guidance for local authorities in England – GOV.UK](#)



## Our action plan: **Partnerships**

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### On partnerships, we are already taking action by:

Continuing to take international, bilateral and multilateral action and cooperation on risk and resilience.

Continuing to use the UK Government's international action to identify and tackle risks before they manifest.



### By 2025, we will:

Grow the UK Government's advisory groups made up of experts, academics and industry experts in order to inform the NSRA. This may include establishing a risk-focused sub-group of the UK Resilience Forum.



### By 2030, we will:

Introduce standards on resilience across the private sector, where these do not already exist, adjusted to take into account the current landscape, priorities and needs across and between sectors.

Provide the wider private sector with better guidance on resilience to support contingency planning and risk management.

Build upon existing resilience standards for CNI to create common but flexible resilience standards across CNI, and do more on the assurance of CNI preparedness.

Review existing regulatory regimes on resilience to ensure they are fit for purpose. In the highest priority sectors that are not already regulated, and for the highest priority risks, consider enforcing standards through regulation.

108. The resilience of the United Kingdom cannot depend solely on the ability of the public sector to organise emergency preparedness or lead a response in times of crisis. The private sector already provides many services and much expertise on resilience, and is essential in preparing for and managing long term risks, in addition to their role in responding to crises. Our vision is for a much fuller integration of these private and third sector partner organisations into our resilience frameworks, through a combination of new opportunities, guidance and obligations.
109. We must also look beyond our borders to strengthen our resilience. We live in an increasingly interconnected world. We consume food and goods shipped from the far corners of our planet, and we connect with individuals at home and abroad through technology that is constantly changing. Many risks are global in nature, or require global action. Our lives are therefore often affected not just by our own actions, but by those taken across the world.

## Private Sector

110. Businesses, especially those that run essential services and Critical National Infrastructure (CNI), are an active partner in building our resilience. Many sectors and businesses are already well aware of the risks that they face, and actively undertake effective contingency planning. Others are actively involved in increasing the UK's resilience and supporting our preparation for emergencies, such as through the development of vaccines. The UK Government must work with businesses to encourage an active partnership in resilience, and to itself learn from the experiences of businesses. This must be a joint endeavour, with the UK Government doing more, through consultation with businesses, to set standards, and share guidance and information. Although regulation can be a powerful tool in ensuring resilience behaviours, we recognise that it is not always appropriate, and many sectors are already subject to significant regulation. Raising private sector resilience standards may mean that the UK Government asks more of some parts of the private sector, but it will provide the guidance and information on risks that organisations need in order to be able to meet the standards that the UK Government sets.
111. At the core of our private sector is a group of owners and operators that run and protect some of the UK's Critical National Infrastructure.<sup>30</sup> These owners and operators are absolutely vital to the UK's resilience, and we must put our full efforts into ensuring that they can operate without disruption. The UK Government's work on CNI is a unique partnership between the public and private sectors. The UK's CNI is an interconnected system. This interconnectedness brings many benefits but comes with risks, especially the possibility of cascading failures across systems. The vulnerability of these interconnected systems is complex and may be significantly underestimated with the potential for issues to be far reaching.

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30 There are currently 13 sectors formally designated as CNI: Communications (sub sectors: Post, Telecommunications and Broadcast), Transport, Civil Nuclear, Chemicals, Defence, Energy, Water, Food, Emergency Services (sub sectors: Police, FRS, Ambulance and Maritime Coastguard), Health, Finance, Government and Space.

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112. Many CNI owners and operators already have a high awareness of risk and are forward thinking about resilience; however, with an ever evolving risk landscape, we must be forward thinking on preparedness in CNI. The UK Government will continue to **strengthen the resilience of our CNI**, across the public and private sectors, by building an ever stronger understanding of our risks and interdependencies, and by developing new standards and assurance processes.
113. This chapter sets out an overarching approach to partnership with the private sector. Most of the sectors that make up this area span the four nations of the UK, and many of those span reserved and devolved policy areas. The UK Government will work with the devolved administrations to ensure that the approach across all four nations is joined up and consistent.

### Standards and regulation

114. Our aim is that the whole private sector will contribute to UK resilience. But what this will look like will differ depending on the size and type of each organisation, and on the risks to which it is vulnerable. Standards can help businesses work out how they can protect themselves and contribute to UK resilience. The National Infrastructure Commission has recommended that the UK Government should publish a set of standards for energy, water, digital, road and rail services, to be reviewed and updated every five years.<sup>31</sup> The UK Government **will introduce standards on resilience and develop an action plan to deliver these** across the private sector, where these *do not* already exist, to give a clear benchmark on what ‘good’ looks like for resilience. These standards on resilience will be non-statutory, and **adjusted to take into account the unique sector landscapes, priorities, needs, and interlinkages with other sectors**, to ensure that expectations are appropriate and not overly burdensome or disproportionate to the benefits they can deliver.
115. As part of this, the UK Government will build upon the resilience standards for CNI which already exist to create **common but flexible resilience standards across CNI**. These CNI resilience standards will be non-statutory and will consider malicious and non-malicious risks, and will help ensure a stronger common understanding of the resilience expected particularly between sectors, identify gaps in resilience measures and drive forward improvements.
116. The National Infrastructure Commission also underlines the importance of regular stress testing of resilience standards by regulators. The UK Government accepts this in principle – as reflected in the approach outlined in this chapter – and will ensure that sectors can continue to manage their own strategies, supported by regulators who can make choices about the best way to stress test the way in which resilience standards are met.
117. To make sure that CNI resilience standards are effective, the UK Government will also consider what form of assurance might accompany new standards. In considering what form assurance might take, we will need to balance the value of assurance against any additional burden. However, given the importance of CNI to our overall resilience,

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31 [2020 Resilience Report](#)

the UK Government will also **do more on the assurance of CNI preparedness and develop an action plan to deliver this**, including where they have a role with local partners and LRFs as Category 2 responders. This will take into consideration the roles, responsibilities and obligations of different stakeholders, including regulators. The outcomes of any exercises and testing are used to better understand vulnerabilities, learn and implement improvements in resilience.

118. Many sectors – particularly CNI – are already subject to regulation on resilience, for example with regards to business continuity or security. Regulators play a key role in linking the priorities and direction of the UK Government and drive improvements to the delivery of resilience. The UK Government will continue to work with regulators to further strengthen key sectors against risk.
  
119. The UK Government will **review existing regulatory regimes on resilience** to ensure that they are fit for purpose, particularly where these are used to assure CNI sectors. Working with regulators, the UK Government will make adjustments where it is agreed they are needed. For example, aviation is highly regulated across a number of areas, including security, but only some of the largest organisations are subject to regulation on resilience. In sectors such as this the UK Government should ensure that organisations are subject to an appropriate and proportionate level of regulation on resilience. This could mean raising baseline requirements or expanding the scope of who is covered by regulation within sectors. Any new regulation or adjustments to regulation will be led by the Lead Government Department, working with the sector, and we will not seek a one-size-fits-all approach.
  
120. **In the highest priority sectors that are not already regulated, and for the highest priority risks, the UK Government will consider enforcing standards through regulation.** This regulation could focus on risk assessment, contingency planning and data sharing. It would be aimed at protecting key sectors and assets against high priority risks, but will respect the ability of companies to run as they need, and will not stifle innovation. Any new regulation will strike a balance between the needs of the sector, consumer impacts, and the national need to guard against risk and we will only regulate where we know that the benefits will outweigh any costs.
  
121. This approach will complement broader efforts to improve the resilience of a significant proportion of the private sector<sup>32</sup> through the use of Resilience Statements, as recommended by the *Independent Review into the Quality and Effectiveness of Audit* in 2019.<sup>33</sup> These new Resilience Statements, to be led by the proposed Audit, Reporting and Governance Authority, will compel company directors to make a public statement about a company’s short, medium and long term resilience against a range of organisational risks.

### Partnership working

122. To make such standards effective, the UK Government needs to help set businesses up for success. Some businesses are already heavily involved in areas requiring resilience

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32 This review focussed on public interest entities across the UK.

33 [The quality and effectiveness of audit: independent review – GOV.UK](https://www.gov.uk/government/reviews/quality-and-effectiveness-of-audit)

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processes and have developed systems for managing risk and planning for crises. But many have limited or no engagement with the resilience world, and so we must help those businesses to meet the standards that we set. To drive this, **the UK Government will support the wider private sector with better guidance on resilience, and risk assessment information, to support contingency planning and risk management.** Alongside this the UK Government will work with newly strengthened LRFs in England to support them to work with local businesses across the country to engage with resilience as critical parts of their local communities and economies.

123. In order for the private sector to meet standards, the UK Government must improve how we share risk assessment and information with them. The UK Government cannot expect organisations to properly prepare if they do not have the tools to understand which risks they face or how those risks may impact on their businesses. In turn, they must also understand how a lack of resilience in their own business may have wider impacts. For example, there are some goods that we may not instinctively link to UK resilience, but they may occupy an essential place in a vital supply chain. Guidance should not only focus on the risks, but also their potential consequences. Sometimes it is not the root cause of a risk that is important in planning, but the consequence that a business must mitigate. For example, if a business' IT systems headquarters is rendered inaccessible, it is more helpful to have a contingency plan for that situation – whether it is a result of flooding, a pandemic or a security incident. There will always be some risks that require specific responses, but organisations should also be prepared for common consequences.
124. In addition, the UK Government will make training on resilience accessible to businesses, including through the UK Resilience Academy (see *Skills* chapter). The private sector can also be a valuable source of data and information on emerging (or active) risks and their impacts. The UK Government will ensure that, as we provide better guidance and information on resilience and risks to private sector partners, we also draw upon the expertise and data within the private sector to inform our resilience efforts.
125. Understanding risk is particularly crucial for CNI. Here, the UK Government will use the CNI Knowledge Base, a bespoke CNI mapping tool, to identify interdependencies across and within CNI sectors. The CNI Knowledge Base is a visualisation and mapping tool whose data forms the 'Single Source of Truth' for UK CNI. The tool helps users across the UK Government to collaborate to build an evolving picture and collective understanding to assist with the proactive management of sector-specific and cross-cutting risk to CNI. The CNI Knowledge Base will enable a step-change in the way the Government anticipates, prevents and responds to cascading risks that could impact our most essential services. A flagship project, initiated under the 2016 National Cyber Security Programme, it provides a world-leading capability in CNI risk management.
126. Furthermore, the private sector can, and should, be an active partner in planning for and mitigating against the risks the UK faces. For instance, during the COVID-19 pandemic most of the promising innovative COVID-19 vaccines originated from biotech companies or academia, and were ultimately manufactured and sold by major pharmaceutical



companies.<sup>34</sup> The UK Government provided funding and support to the development and distribution of some of these, including the Oxford/AstraZeneca vaccine, which has protected millions of people across the UK.

127. The UK Government commits to **continuing to build partnerships between the public and private sector to improve our collective resilience and to identify opportunities for innovation.** This expands on previous work such as the “100 Days Mission to Respond to Future Pandemic Threats” report<sup>35</sup> (100DM) which the UK initiated during our 2021 Presidency of the G7. The 100DM was developed in collaboration with international organisations, industry chiefs and chief science advisers and presents 25 recommendations to achieve safe and effective diagnostics, therapeutics and vaccines in the first 100 days from the identification of a pandemic threat. Since June 2021, international organisations, governments, industry and philanthropic implementation partners have mobilised and formed strong coalitions to deliver the recommendations.
128. One excellent example of the partnership between the UK Government and the private sector on risk is the Cyber Essentials programme.<sup>36</sup> Run by the National Cyber Security Centre (NCSC), the programme helps organisations to protect themselves against a range of the most common cyber attacks and provides certification to those who pass the assessments. Certification provides reassurance for both current and potential customers and enables organisations to better understand their current cyber security status. For instance, certification is a requirement for UK Government contracts involving the handling of sensitive and personal information. In providing certification, the Cyber Essentials programme also acts as a benchmark for wider good cyber security practice within organisations. We look for further opportunities to build on this type of good practice.

## External Expertise

129. Expertise on resilience can be found in all parts of the system, and **we must make sure that the UK Government’s policy making and assessment on risk and resilience are informed by as many expert views and evidence as possible.** The Iraq Inquiry<sup>37</sup> demonstrated the danger of basing our decision making on narrow views or groupthink. Although the UK Government already has a solid track record of working with partners across the system, we can formalise this.

## NSRA Challenge

130. The refreshed NSRA process will expand our formal mechanism for involving external expertise, with a greater number of experts from a wider range of disciplines and backgrounds. We will look to resolve security and technical factors that can prevent open and transparent conversation between government and external experts. The UK

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34 [UK Vaccine Taskforce 2020 Achievements and Future Strategy](#)

35 [100 Days Mission to respond to future pandemic threats](#)

36 [About Cyber Essentials – NCSC.GOV.UK](#)

37 [The Report of the Iraq Inquiry](#)

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Government will grow our advisory groups made up of experts, academics and industry experts from a diverse range of specialist fields in order to inform the NSRA including establishing a risk-focused sub-group of the UK Resilience Forum.

### UK Resilience Forum

131. The UK Government has set up a new UK Resilience Forum (UKRF) to strengthen UK resilience by improving communication and collaboration at a national level on key discussions about risk, emergency preparedness, crisis response and recovery. Established in 2021, the UKRF brings together representatives from the UK Government, devolved administrations, emergency services, responder organisations, the private sector and the voluntary and community sector. This advisory board is aimed at aligning efforts across the system, strengthening relationships between partners, and informing the government's work on its resilience commitments under the *Integrated Review*.<sup>38</sup>

### SAGE and scientific advice

132. Scientific advice and expertise are invaluable in how we understand, anticipate, prepare for, and respond to risks. During COVID-19 we saw the essential role that the Scientific Advisory Group for Emergencies (SAGE) played in understanding how the pandemic was evolving, in providing expert science advice to decision makers, and in communicating the risk to the public. The COVID-19 SAGE and its expert sub-groups provided a broad and diverse range of expertise – from multiple institutions and disciplines, including behavioural and social sciences – that allowed for robust, relevant and high-quality science advice to be given to decision makers. Previous SAGEs have provided a critical service to the UK Government across numerous crises, drawing on specialist knowledge and expertise from academia and the private sector and providing evidence-based challenge, advice and analysis for government decisions during an emergency. The diversity of backgrounds and expertise that is drawn upon during active SAGEs can provide broad and data-driven understanding of relevant active emergencies and their impacts, while ensuring diversity of thought. The SAGE model, and its potential subgroups, will continue to play a vital role in supporting government decision makers during active emergencies.

133. Whilst SAGE sits at the UK level providing scientific advice on emergencies, provision also exists to provide advice to local responders. Science and Technical Advice Cells (STACs) provide expert advice to local Strategic Coordination Groups (SCG) to inform the immediate response to an emergency and the management of longer-term consequences. In an emergency, local decision makers and emergency responders must quickly understand the potential impacts on the ground so that they can take timely tactical and operational decisions, for example whether it is necessary to evacuate an area at risk of flooding. STACs bring together science and technical experts from a range of agencies to advise the Gold Commander. The STAC model will continue to play an important and active role in local crisis response operations.

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38 [Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy](#)

SAGE and STACs are only activated during emergencies that require coordinated science advice and STACs can be activated even if a SAGE is not required, depending on the emergency itself. SAGE Secretariat must liaise and engage with the STAC lead, to facilitate timely knowledge transfer to the local level, and to allow SAGE attendees access to local intel on the incident which could provide critical scientific evidence.

134. Outside of active emergencies, the UK Government draws on robust, relevant and high-quality science and technology advice to understand, prevent, prepare for, respond to, and recover from risks. The UK Government draws on the science capabilities of public sector research establishments such as the Met Office, Ordnance Survey and British Geological Survey for important data and evidence on resilience challenges. The Natural Hazards Partnership is central in bringing together the science community in the resilience space and supports various aspects of resilience work including the NSRA. UK Government departments should continue to invest in research and development to inform their understanding and planning, and also communicate their priority research questions to academia and industry through their Areas of Research Interest publications.
135. Lead Government Departments should actively and regularly draw upon their Chief Scientific Adviser (CSA) to access internal and external science advice and relevant expertise for the risks they own. By proactively drawing upon CSAs and their expert networks, as well as analysis teams and futures expertise within departments and across government, LGDs can ensure evidence-based challenge and analysis of response planning beyond existing policy teams and across a diverse range of expertise. The Government Office for Science also facilitates access to the wider CSA network and external S&T expertise, particularly in response to emerging risks and in preparation for potential SAGE activations. The Government Science and Engineering Profession is working to increase STEM skills across government, including upskilling policymakers' capacity and skills to effectively use evidence and data to provide challenge in policy making.
136. In driving our work on resilience, the Government is committed to inviting expert challenge and input to build its understanding of risk and preparedness. We will remain open to opportunities, in addition to the mechanisms outlined above, to draw in external expertise.

## Interconnected World

137. The *Integrated Review*<sup>39</sup> outlines that we are moving towards a more competitive and multipolar world, with growing and diversifying state threats to the UK. Our international allies and partners recognise that mutual support is vital for resilience, and that collective action by like-minded countries is of critical importance.
138. The UK's international connections are vectors for both risk and resilience. Risks do not operate in silos, but are interconnected like our economy, environment and society. Those connections draw risks across borders, reinforce or cause other risks,

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39 [Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy](#)

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and expose the UK to long-term international trends. The same connections are vital for resilience, supporting global action and shared endeavour on the biggest risks, harnessing international expertise, and providing economic diversity. For the UK, resilience is not simply a matter of homeland security; this is a globally-oriented maritime trading nation without a large continental hinterland, and that must shape our strategic approach.

139. Understanding this is integral for both addressing the causes of risk and supporting responses and recovery to any materialisation of risk. The UK Government will continue **to work through multilateral forums to promote global resilience and, in the ever-contested international world that we find ourselves in, we will raise awareness of the importance of resilience in their work.**
140. The UK Government will continue to take a leading role on resilience in many multilateral organisations. This includes in the G7 where, during the UK's 2021 G7 Presidency, the Prime Minister nominated Lord Sedwill to chair an independent G7 Panel on Economic Resilience, which published a report titled 'Global Economic Resilience: Building Forward Better'.<sup>40</sup> The G7 Leaders noted their appreciation of this work in the Carbis Bay G7 Summit Communiqué and outlined that they will continue to work on the issues highlighted by the panel.<sup>41</sup> In 2021, and as outlined later in this chapter, the UK also hosted the COP26 climate conference, during which the Glasgow Climate Pact was agreed. At this critical point in history, it is driving action on international climate change mitigation and adaptation measures. In addition, in June 2022, the UK announced<sup>42</sup> that it will give £25 million to found a new World Bank fund to prevent, prepare for and respond to future devastating pandemics. Furthermore, as a permanent member of the UN Security Council, the UK Government has the influence to advance freedom, peace and security at the highest of global levels.
141. The UK Government will continue to engage **countries bilaterally on resilience**, and we can utilise our international networks to support our engagement. We also call upon our expertise, such as in the Emergency Planning College and military, to support any such collaboration on resilience. In this way, bilateral initiatives can create links below the national level, forming effective partnerships between practitioners and experts that can drive real change.
142. The UK Government will also build capacity and capabilities in low- and middle-income countries around the world to help support improvements to their economies, security and resilience. **By enhancing resilience in these partner nations, the UK will improve the global resilience landscape and ultimately support its own.** The UK Government will continue to support this through our international development work.

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40 [Global Economic Resilience](#)

41 [CARBIS BAY G7 SUMMIT COMMUNIQUE](#)

42 [UK supports new international drive to prevent and prepare for future pandemics](#)

## Applicability across the UK

At the time of publication, it is anticipated that:

- The standards, or any new regulations proposed in this chapter will be decided on a sector-by-sector basis. Accordingly, they will be led by the UK Government, but in consultation with the devolved administrations where appropriate.
- New guidance should be created for business across the UK and includes best practice. The UK Government will lead this work in consultation with the devolved administrations. The guidance be made available to the devolved administrations, but the devolved administrations will decide how best to communicate it to their partners.
- While representation at existing multi-and bilateral forums will continue to be led by the UK Government, the devolved administrations will continue to lead their own bilateral and international engagement and action, in devolved areas of responsibility.



# Our action plan: **Communities**

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On communities, we are already taking action by:

Continuing to deepen and strengthen our relationships with the Voluntary and Community Sector (VCS) in England.



By 2025, we will:

Offer better guidance from the UK Government to LRFs and local partners in England, created with local responders, the VCS and communities to support them working with vulnerable groups.

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143. We regularly see the generosity of people coming forward to help their communities and the capacity of communities to support those in need: from emergency responders and networks of businesses, voluntary groups and local volunteers, to smaller community groups and individuals who undertake those simple and essential acts of good neighbourliness.
144. Communities<sup>43</sup> include individuals (e.g. members of the public and households), organisations (e.g. businesses or voluntary, community and social enterprise groups), groups (e.g. those with shared characteristics, interests or identities), and associations and networks (e.g. local community, faith and business networks). The UK Government's *Community Resilience Development Framework*<sup>44</sup> sets out that community resilience in England is enabled when the public are supported to harness local resources and expertise to help themselves and their communities to: prevent, prepare for, respond to and recover from disruptive challenges, in a way that complements the activity of emergency responders; as well as planning and adapting to long term social and environmental changes to ensure their future prosperity and resilience.
145. For communities, our 'whole-of-society' approach to resilience means that everyone recognises their role in, takes responsibility and contributes to, the UK's resilience. To achieve this, the UK Government will support greater community responsibility and resilience, driving a cultural shift where everyone who can, is prepared and ready to take action and support themselves during an emergency. This will mean those needing more specific or tailored support can be prioritised.

## Voluntary and Community Sector

146. The Voluntary and Community (VCS) sector plays a vital role in the UK's resilience. The UK Government works with many VCS organisations that contribute to our resilience. This includes for example, the Royal National Lifeboat Institute, British Red Cross, St John Ambulance, Neighbourhood Watch and Citizens Advice. In line with the approach outlined in this chapter, **the UK Government will continue to deepen and strengthen its relationships with the VCS in England. The capabilities of the VCS will be better understood and integrated, as appropriate, strengthening resilience at local and national level in England.**
147. The impact of the sector ranges from grassroots and local level right through to providing national and international services working alongside statutory responders. To continue to support the sector, the UK Government will work with strengthened LRFs in England and provide guidance and support for engaging and working with communities and community groups on both acute and chronic risks, so that they become increasingly active partners in building local resilience. The Department for Digital, Culture, Media and Sport is also funding the Voluntary and Community Sector Emergencies Partnership (VCSEP) in England with up to £1.5m, to 2025. This funding

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43 Definition of 'communities' informed by the work of: Shaw D and Jordan R (2022) The Renewal of Community Resilience: A new local and national resilience capability? In: [The Manchester Briefing on Covid-19](#)

44 [Cabinet Office Community Resilience Development Framework](#)



will be used to support and coordinate the voluntary and community sector's input into emergency preparedness, planning and response. Through its partnership and network, the VCSEP will reach thousands of community organisations in order to share insight and build capability at a local and national level.

148. National, regional, local and grassroots VCS and faith-based organisations have been at the forefront of the response to emergencies. Over the last few years, the UK has also seen the emergence of new voluntary sector capabilities, such as the National Emergencies Trust that launched in November 2019 with the aim of collaborating with charities and other bodies to raise and distribute money and support victims at the time of a domestic emergency. The National Emergencies Trust launched its first fundraising appeal in response to COVID-19 and raised close to £100 million, distributing money raised through UK Community Foundations to national and local charities who could then support those most in need.

### Supporting partnerships between statutory responders, the Voluntary and Community Sector, and communities in England

149. Building relationships and partnerships is an important component of this framework. The UK Resilience Forum has been established to steer partnerships across the resilience system at the UK level, and includes public, private and VCS organisations. To empower and support greater community responsibility and resilience, communities must be active contributors to resilience planning and part of decision-making processes. The UK Government will continue to support and encourage engagement between communities and local responders, ensuring that the knowledge and skills of the diverse people and organisations that exist in our society are enabled to contribute their fullest to local planning. The UK Government will also consider ways **to enhance the role of citizens** and the VCS as an integrated part of **resilience policy making and planning**.
150. At the local level, successful community resilience approaches are often based on connection and relationships. Deepened partnerships between statutory responders, the VCS sector and communities provide benefits across the board. It will mean that community and voluntary capabilities are better understood and integrated into resilience and emergency management activities. It will also assist local responders in developing a better understanding of their communities and needs and will reduce demand on statutory responder resources during emergencies so they can be focused on those most in need. To support this work, the **UK Government will consider options for measuring and evaluating statutory responder engagement with the VCS and wider community and develop an action plan to deliver this**.

### Reducing disparity in the impacts of emergencies

151. The impact of emergencies can be felt by everyone, but some parts of society are more adversely affected. The UK is faced with a wide range of risks that can have a disproportionate impact on vulnerable and at-risk groups and communities. Individuals within these groups and in these areas can experience more significant impacts from

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risks and incidents when they happen. They are also more likely to suffer financial hardship either as a direct or indirect consequence of a risk materialising. Health and socioeconomic disparities are also linked and impact on people's ability to reduce risk and respond in emergencies meaning these communities and places may have fewer resources and less capacity to proactively take steps to build their resilience.

152. The UK Government will continue to take a leading role on resilience in many multilateral organisations. This includes continuing to work with and through the G7 under the Japanese Presidency in 2023 and beyond, building on work started during the UK's 2021 G7 Presidency, when the Prime Minister nominated Lord Sedwill to chair an independent G7 Panel on Economic Resilience, which published a report titled 'Global Economic Resilience: Building Forward Better'. In 2021, and as outlined later in this chapter, the UK also hosted the COP26 climate conference, during which the Glasgow Climate Pact was agreed. At this critical point in history, it is driving action on international climate change mitigation and adaptation measures. In addition, in June 2022, the UK announced that it will give £25 million to found a new World Bank fund to prevent, prepare for and respond to future devastating pandemics. Furthermore, as a permanent member of the UN Security Council, the UK Government has the influence to advance freedom, peace and security at the highest of global levels.
153. When crises happen, people and groups can lose access to vital services. We know that the effects of this loss can, and will, be felt the most by the most vulnerable in society.<sup>45</sup> The UK Government will create a **stronger and more consistent approach for operators of essential services to identify, communicate with, and offer support to vulnerable customers and develop an action plan to deliver this**, and consistency in the sharing of information of vulnerable customers with LRFs and wider relevant local partners in England involved in emergency planning and response. This will include working with relevant operators of essential services to ensure that plans are in place to assist vulnerable customers in an emergency. The UK Government will work with industry partners to develop guidance to support this.

### Applicability across the UK

At the time of publication, it is anticipated that:

- Any new guidance for practitioners and communities will be created in partnership between the UK Government and devolved administrations, so that it reflects the resilience arrangements, and needs of organisations and communities across all four nations.

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45 [Energy Emergencies Executive Committee Storm Arwen Review – Final Report](#)



## Our action plan: **Investment**

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### On investment, by 2030, we will:

Have a coordinated and prioritised approach to investment in resilience within the UK Government, informed by a shared understanding of risk.

Consider options for funding models for any future expanded responsibilities and expectations of LRFs in England.

Offer new guidance to community organisations and individual householders, to help those people to make more informed decisions about investing in their own resilience and preparedness.

154. Building preparedness for risks that may threaten the lives of our citizens, national security, economic prosperity, and societal wellbeing is a critical function of government and understanding of risk should be fundamentally built into our investment decisions and structures. Investing adequately in crisis prevention is more cost effective than merely responding to them, so there needs to be more purposeful links between our investment decisions and our understanding of risk.
155. The UK Government is committed to investing in resilience. It currently invests in a huge range of activities and capabilities that contribute to our resilience, either that are dedicated to resilience or have broader primary aims. For example, having a well functioning national health system is vital to our resilience – but it is not in itself a resilience function.
156. Investment in resilience is not only the responsibility of Governments, but is for the whole of society. This chapter considers four key areas of investment on resilience: public sector and UK Government investment, investment in local resilience and Local Resilience Forums in England, the private sector, and community and individual investment.
157. In the devolved administrations, spending on devolved areas of competence in relation to resilience is the responsibility of those administrations and is not considered here.

### Public Sector Investment in Resilience

158. The UK Government spends significant sums on emergencies, with the majority spent on responding and recovering rather than longer term investments in prevention and preparation. When emergencies happen the priority is mitigating the impacts of the event and minimising the effect on the public. The UK Government will continue to spend on recovery as a vital aspect of the emergency management cycle which can ensure improved future preparedness, especially when we draw on ‘lessons learned’ to shape decisions.
159. Incidents over the last decade have repeatedly demonstrated that the cost of responding to and recovering from emergencies can be significant. This often outweighs the cost of preparing for or preventing such events. Examples include:
  - Where there is a risk of flooding, the Environment Agency has helped ensure homes are built in a flood safe way. Every £1 spent advising on flood risk matters in spatial planning applications has saved £12 in future flood damages.<sup>46</sup>
  - During Storm Christoph, 49,000 properties were protected from flooding, with fewer than 1200 inundated.
  - Improved response arrangements ensured that a Foot-and-mouth outbreak in 2007 caused much less damage (£150 million) than the outbreak in 2001 which cost the UK around £8 billion.<sup>47</sup>

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46 Provided by the Environment Agency as part of the Call for Evidence.

47 [National Risk Register](#)

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160. In future, the UK Government will **drive strategic resilience building to acute and chronic risks through targeted and evidenced prioritisation of investment in prevention and preparation in England**. This does not mean that the other stages of the risk life cycle – particularly response and recovery – will go unfunded, but rather that the UK Government should ensure adequate investment and maximise the impact of that investment across the risk lifecycle. Investment in risk reduction will be essential in easing the investment pressures on resilience activity and capabilities. As part of our risk reduction efforts, the UK Government must also bake resilience into wider government projects and policies.

### UK Government investment

161. Resilience building and planning for risk are key responsibilities of the UK Government, and are underpinned by how investment decisions are made. To do this we need to have a shared understanding of how the UK Government invests its money on resilience, in order to ensure that investments are directed where it can make the most impact. This will be informed by a shared understanding of the risks we face, and a shared understanding of our collective risk tolerance.
162. Spending Reviews (SRs) are led by HM Treasury and set multi-year budgets for departments in line with the UK Government's policy priorities. The risk landscape is complex and cuts across departmental boundaries, so it is **important that investment in resilience is considered and coordinated across government**. HM Treasury has prioritised join-up of spending plans where appropriate but as we look to create the most resilient UK by 2030, we can do more to coordinate across the UK government in resilience.
163. To make the most of our considerable investment in resilience, the UK Government must be able to prioritise and coordinate both across departmental lines and across the UK Government and local government. Implementation will be iterative and will take time but the UK Government will begin to **measure and track departmental investment in resilience** across risks, meaning risk owning departments can track investments. On this and other government investments, HM Treasury will continue to ensure that the UK Government is making investment decisions which represent the best value for money. This is particularly important to our overall investment approach as so much resilience activity spans departmental boundaries. Alongside this, it will be crucial to build our evidence base on the impact of civil contingencies risks and emergencies across the country as well as the impact of interventions from the UK Government and our partners. This will allow us to more fully consider outcomes, impacts and value for money assessments in our resilience investment decisions.
164. The risks that we face are not static but change over time and we must also reflect that in how the UK Government invests in risk prevention and preparation. The UK Government needs a clear view of how we are investing across the risk landscape to ensure our investment priorities can flex to the evolving risk picture and we are mitigating risk effectively.
165. The UK Government will take **a coordinated approach to our investment in resilience**. To make strategic investment decisions, we need to understand how current capabilities match up with risks and concentrate investment where gaps are identified.

As a first step, the UK Government will **agree on a working definition of resilience activities and capabilities, and using that, will map current UK Government resilience capabilities**. The UK Government will establish a process to capture current levels of investment across departments and track investment on those capabilities.

166. Once the UK Government has an agreed map of resilience activity and capability, we will **map resilience investment within the UK Government** alongside other funding arrangements (e.g. the Counter-Terrorism ringfence) and against UK Government risk assessments. This will highlight where investment needs to be adjusted, or opportunities to reduce duplication, which the Cabinet Office will work with departments to take action on. This mapping should account for investment outside of government. For example, if a risk receives relatively little funding from the UK Government, but is well funded within the private sector or at a local level, then we should consider whether there is a genuine investment gap or not.
167. This will mean the UK Government can streamline investment in risks and avoid duplication of investment by departments. It will ensure we are making informed investment decisions, which should also be informed by national security and science and technology advice. For example, futures and foresight advice can support forward-looking and long-term investment decisions, enabling investment into emerging technologies and capabilities that could be critical to the UK's resilience. This will ensure we are investing taxpayer money most effectively by evidencing where investment could best meet the needs identified by our risk assessments. We know that the risk picture is dynamic and can change rapidly, and so although our approach to investment should be fundamentally informed by our understanding of risk, it will not be the only factor that we consider.
168. Implementing this will require a continuous and iterative process before it is fully embedded. It must also be a process that includes all government departments that contribute to resilience, and the Cabinet Office and HMT will work together with departments to embed the changes.

### Investment in local resilience and Local Resilience Forums in England

169. A country's resilience is built on the actions, choices and investments made by the individuals, organisations, businesses and government which come together to deliver resilience. When considering local resilience funding it is important to recognise that a wide range of core activities, capabilities and functions that may not be explicitly badged as 'Resilience' are crucial to an area's resilience (e.g. core Fire and Rescue Service capabilities).
170. Local resilience structures are devolved, and therefore the changes to LRF funding set out below have been implemented within England. The UK Government is fully committed to ensuring integration and enhancing cross border collaboration and we will continue to work with local resilience leaders and practitioners from Scotland, Wales and Northern Ireland, sharing best practice and ensuring the mutual benefits of these changes can be shared across the UK.
171. As part of our IR commitment to consider strengthening the roles and responsibilities of LRFs in England, the UK Government is carefully considering how LRFs may be appropriately supported and funded into the future. Currently there is no single funding

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allocation or funding approach for each LRF and until recently the two main sources of LRF funding in England were:

- **Direct financial contributions from partners:** often in the form of voluntary and locally managed contributions from partner organisations, used to fund staffing and other resources to run a core secretariat function for coordinating the activities of the LRF.
- **In-kind contributions from partners:** LRFs receive a wide range of benefits in kind, provided by the chair organisation and other funders. These benefits are provided to support a core secretariat function. The most common benefits in kind LRFs receive are IT equipment, office and meeting space, training and partner HR and welfare support.

172. In highly exceptional circumstances, some LRFs have also received ad-hoc funding directly from the UK Government to support the delivery of locally led resilience activity tied to specific events, such as planning for the UK's departure from the European Union and the COVID-19 pandemic.
173. In 2021, the UK Government announced £7.5m of funding to LRFs in England as a 12-month pilot project to collect evidence on the potential efficacy, challenges and opportunities of the UK Government providing a degree of central funding to LRFs. The aim of the LRF funding pilot was to enable LRFs to build new capacity and capability and to encourage innovation within the sector, without displacing existing partner contributions. The evaluation of this pilot has indicated that the funding pilot has met its objectives: funding has increased essential capacity and capability across LRFs in England to support the multi-agency coordination of planning and preparation activities, with LRFs recruiting new staff and delivering a wide range of projects in support of specific nationally and locally defined priorities. The evaluation concluded that the evidence available suggests that the pilot funding is likely to represent value for money in the long term and that there is currently no evidence of displacement of partner contributions.
174. Building on the success of the funding pilot, in late 2021 **DLUHC agreed a £22m three-year funding settlement for LRFs in England** starting in the 22/23 financial year. This additional UK Government funding will complement the contributions of partners and will allow LRFs to continue to enhance their strategic coordination capacity and capabilities to reflect the already enhanced expectations the UK Government has of LRFs.
175. We recognise that LRFs need a consistent, sustainable funding model to continue to build the necessary capacity and capability to deliver what the UK Government has grown to expect of them and the proposals set out to further strengthen their role and responsibilities. The UK Government will **consider options for funding models for any future expanded responsibilities and expectations of LRFs**. The UK Government also recognises that funding from the UK Government alone should not be the answer. Over many years LRFs have developed through the contributions of partner organisations to reflect local priorities and ways of working. Any future funding model must build on the principle that funding for local resilience should continue to be provided by the categorised responders of English LRFs alongside any funding from UK



Government. Any direct funding from the UK Government should seek to compliment, not displace or disrupt, these arrangements.

### Private Sector investment in resilience

176. There is already significant investment in resilience throughout the private sector. Some of this is direct investment in preparation for or protection from risk – for example, businesses investing in cyber security to protect their assets. Some of this is indirect, as businesses seek to make their supply chains, services or products reliable in order to secure commercial advantage.
177. Ultimately, decisions are taken by private companies based on multiple competing factors: the need to maintain profit margins, manage their reputation or balance decisions against overall operational planning means that private sector organisations do not always put resilience at the heart of their investment decisions. The UK Government will not aim to change or overrule the private sector's right to take these decisions.
178. Not least because the private sector has demonstrated that it can be capable of independently increasing investment in resilience when the need arises – 95% of UK business leaders are aware of the need for investment in wider resilience<sup>48</sup> and following COVID-19 and the vulnerabilities in international supply chains that it exposed, worldwide investment in supply chain management companies increased from \$5.9bn in 2020 to \$11.3bn in 2021.<sup>49</sup> However, there was a clear immediate commercial alignment with longer term resilience here, whereas businesses may find other emergencies (such as flooding) harder to recognise or quantify.
179. Businesses do make independent investment in risk and resilience when advice is provided by governments – London Gatwick Airport allocated £30m in 2013 to implement the recommendations of a UK Government review into flooding disruption that had affected the airport, including improved flood modelling, and the completion of a bespoke flood warning scheme.<sup>50</sup>
180. This is important because the economic impact of catastrophic events has continued to grow and the estimated resilience investment requirements have grown accordingly as threats such as cybersecurity and climate change increase in severity. There is still an average worldwide gap between the economic cost of a catastrophic event and private sector insurance coverage for costs of over 60%.<sup>51</sup>
181. Private sector investment in resilience differs across sectors, organisations and risks. Although investment decisions must remain the responsibility of sectors and companies, the UK Government **will provide improved guidance for businesses on risk, and support the insurance sector to help protect against specific risks.**
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48 [PWC Global Crisis Survey 2021](#)

49 [After Record Year, Supply Chain Funding Shows No Signs of Breaking Down 2022](#)

50 [DfT, Transport Resilience Review: A Review of the Resilience of the Transport Network to Extreme Weather Events 2014](#)

51 [GREAT, The Business of Resilience: Summary Report 2022](#)

### Insurance

182. When used alongside good preparation and planning, having adequate insurance against risks is an important part of building resilience for individuals and businesses. The UK Government and the insurance industry have worked together in a variety of ways to ensure there is insurance available for individuals and businesses. The Flood Re and Pool Re schemes are the most often cited examples of insurance used by the UK Government in relation to risks and are examples of longer-term government supported reinsurance schemes. This approach can also work in the shorter term. For example, the Film & TV Production Restart Scheme which provided confidence to the UK Film and TV industry to restart productions during the COVID-19 pandemic.
183. Insurance is increasingly supporting resilience in other sectors. Cyber attacks are a key expanding risk to UK businesses and here we can see both the private sector's desire to invest in cyber security, and the importance of governments in aiding and directing that investment. The scale of the threat is significant: 39% of all UK businesses reported a cyber breach or attack in 2022.<sup>52</sup> UK Government support for businesses centres around the creation of the National Cyber Security Centre, which offered support to 777 significant incidents in 2020/21.<sup>53</sup> As the threat has grown, so has interest in guarding against the threat. We have seen an increase in senior business interest in cyber security, from 69% in 2016 to 82% in 2022. The private sector market for cyber insurance has grown in tandem: 5% of UK businesses now have a specific cyber security insurance policy and 38% have cyber security as part of a wider insurance policy.<sup>54</sup>
184. The UK Government, with the devolved administrations, will continue to **explore opportunities to better support the insurance industry and develop an action plan to deliver this**, recognising it is an important way to encourage organisations to take action on risk and ensure that, when a crisis hits, we are all well prepared. However, insurance is not a substitute for good preparation, and both the insurance sector and UK Government have an important role to play in encouraging businesses to have appropriate contingency plans in place as well as adequate insurance.

### Community and individual investment in resilience

185. Every level of society has a part to play in building national resilience, including at a community and individual level. In the *Risk* chapter, we set out how the UK Government will make improvements to how it communicates about risk so that communities and members of the public can make informed decisions about managing risks in their local area. Alongside this, the UK Government will work with LRFs in England and local partners to offer **new guidance to community organisations and individual householders, to help those people to make more informed decisions about investing in their own resilience and preparedness.**

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52 [DCMS Cyber Security Breaches Survey 2022](#)

53 [NCSC, Annual Review 2021](#)

54 [Cyber Security Breaches Survey 2022](#)

186. Investment in community resilience is a key part of the Levelling Up agenda. The UK Shared Prosperity Fund is a central pillar of the UK Government's ambitious Levelling Up agenda and a significant component of its support for places across the UK. It provides £2.6 billion of new funding for local investment by March 2025, of which £559m is set aside for the adult numeracy programme 'Multiply'. More than £2bn will be made available for places to identify and build on their own strengths and needs at a local level, focused on building pride in place and increasing life chances, and delivered through three investment priorities: communities and place, local businesses and people and skills.

### **Applicability across the UK**

At the time of publication, it is anticipated that:

- The proposals on public sector investment will apply to the UK Government only.
- Guidance to inform and drive private sector, community, and individual investment will be created in partnership between the UK Government and devolved administrations, but individual Administrations will be able to decide how best to communicate the guidance with their stakeholders.
- Work with the insurance industry will be led by the UK Government, with close consultation with the devolved administrations where it impacts devolved responsibilities.



## Our action plan: **Skills**

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### On skills, by 2025, we will:

Deliver a new UK Resilience Academy, built out from the Emergency Planning College, making world class professional training available to all that need it.

Deliver a new training and skills pathway to drive professionalism and support all those pursuing a career in resilience.

Reinvigorate the National Exercising Programme to test plans, structures and skills.

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187. At the heart of the resilience system are the resilience specialists and many individuals who lend their skills and time to building resilience. The UK Government cannot deliver an ambitious programme of change on resilience without making sure that these people have the required skills and knowledge to draw upon. This chapter focuses on what the UK Government can do to develop skills throughout the resilience system, as well as complement the wealth of expertise and training driven by universities, private institutes and the private sector. Our aim here is to build on this, and support and encourage the upskilling of all those that work in all areas of civil contingency risk and resilience.
188. The declaration on Government Reform in June 2021 set out an ambitious statement for improving how the UK Government delivers for the public. To do this we need the **best people leading and working in government and across the wider resilience sector** to deliver better outcomes for citizens and achieve our ambitions for the country. By doing so, we will also be making the most effective use of the finite resources available.

## Resilience skills

189. To deliver this framework, public servants must have both specialist and generalist knowledge, skills, and networks. This will be delivered through the recently published plan by the UK Government Skills and Curriculum Unit (GSCU) to create a Government Campus and new curriculum for civil servants: Better Training, Skills and Networks<sup>55</sup> in January 2021. Developing resilience and crisis management skills, knowledge and networks form part of the new GSCU Campus which will also address wider aspects of risk management. These skills must be rigorous and accessible across the Civil Service, from core universal knowledge to specialist training. We will also consider whether resilience can be reflected more explicitly in the frameworks of government professions. Including resilience in the policy profession standards framework, for example, could raise the baseline competency across the UK Government as part of broader risk management improvement initiatives.
190. Excellent learning and development elevates the effectiveness of all resilience and crisis activity. Investment in knowledge, skills and resilience behaviours needs to be made at the pre-emergency phase, building preparedness and resilience before it is needed, particularly for areas with only a small number of specialists currently practising.
191. The UK Government will build resilience knowledge, skills and behaviours for all in the resilience system through:
- Defining competence standards that align to extant British Standards Institution standards
  - Providing appropriate individual training and education, assessment and accreditation and mechanisms to share best practice;
  - Providing collective training and exercising; and
  - Continual professional development and retention to remain up-to-date.

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55 [Better Training, Knowledge and Networks: the New Curriculum and Campus for Government Skills](#)

192. This chapter focuses mainly on crisis and response skills and training, as that is where the majority of specialist skills are required in resilience work. Our renewed efforts will require a broadening of skills within specific risk areas. For example, efforts to mitigate or prevent supply chain or climate risks will require specialist skills and knowledge that are specific to that subject.

## Professionalisation

193. The UK Government will play a central role in both driving and enabling the development of skills and knowledge of people working right across resilience. To reflect this broad audience with a shared purpose, the UK Government will further strengthen the professionalisation of resilience work through the creation of the UK Resilience Academy and by the creation of training pathways as part of broader risk management learning journeys.

## UK Resilience Academy

194. At the centre of our professionalisation offering will be a new **UK Resilience Academy** (UKRA), which will be the heart of a network of similar UK-Government affiliated providers and deliver leadership and learning to all those in the resilience system. This will be built up and out of the Cabinet Office's Emergency Planning College (EPC) which is already partnered with the UK GSCU.

195. Our vision is that the **UKRA will be a physical and virtual campus delivering the scoping, design and delivery of training, wider education, learning and development and exercising for resilience professionals.** It will bring together similar providers into a network, becoming a wider centre of excellence, incorporating concepts and doctrine, training and education, exercise and experimentation, lessons learning and implementation and innovation.

196. The EPC already contains much of the capability and expertise required to deliver this, however it will need a broadened remit to include the private sector covering CNI, the voluntary sector and finance. It will also provide ratified and current mechanisms, methods, materials, and guidance to inform individual citizens in a way that is clear, simple and would benefit their lives. Although our intention is to make the UKRA accessible to as broad a range of partners as possible, attendance at UKRA training will not be a condition for working with the UK Government on resilience, nor will it replace other excellent training partnerships elsewhere in government.

197. In addition to the EPC, there are a number of UK Government affiliated learning and development providers sharing skills, expertise and powerful networks, for example, the UK Leadership College for Government and College for National Security, as well as JESIP, UK Defence Academy and the College of Policing. All make different and essential contributions to the resilience learning and development landscape. Networked to the UKRA, this will create a comprehensive skills and training centre that needs to be promoted and made accessible to all those that have a role in resilience.

### Standards and Training pathways

198. Lessons identified from incidents and complex, long-term responses such as COVID-19 have demonstrated that, as well as the need for wider risk management improvement, there is the need to improve coherence of the crisis management system and its overall operational effectiveness.
199. Building on existing good practice across government, the UKRA will work with Lead Government Departments and other learning and development providers to further enhance resilience capabilities and develop a resilience training pathway focusing on;
- The development and recognition of resilience knowledge, skills and behaviours and considering a progressive competence framework for individuals, aligned to relevant guidance, standards, lessons and good practice that is associated with a clear Learning & Development pathway. The UK Government will – in line with the GSCU curriculum for UK Government skills – consider audiences across government who need a wide but less deep grounding in resilience;
  - Exploring the use of enhanced capability standards by drawing on existing best-practice. This will establish a ladder for progressive improvement and a yardstick for assessment and assurance; and
  - Establishing a network or community of resilience professionals across government to develop, deliver and signpost L&D opportunities; facilitate communications across the network; organise continuing professional development events; and provide a forum for members of the resilience community to share and raise issues relating to professional development and improvement.
200. The resilience training pathway must also link to other risk and resilience training across the UK Government such as business continuity training and risk management.
201. The UK Government will establish a regular UK Resilience Lessons Digest.<sup>56</sup> This will summarise lessons from a wide range of relevant sources to share insights consistently across the UK Government and wider partners. It will coordinate knowledge to promote continual improvement in UK resilience training, exercising, doctrine, standards and good practice. The Lessons Digest will complement existing mechanisms for identifying and implementing lessons, including the JESIP Joint Organisational Learning (JOL) system, methods which drives continuous improvement in multi agency interoperability, and the Home Office Counter Terrorism Exercising (CTX) Team, which captures and monitors lessons from national Counter Terrorism exercises.

### National Exercising Programme (NEP)

202. Planning for emergencies cannot be considered reliable until it has been exercised and has been shown to be workable. Exercises have three main purposes: to validate plans; to develop competencies and give them practice in carrying out their roles in the plans; and to test well-established procedures and identify areas for refinement and improvement.

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56 [Lessons Digest](#)



- 203. The UK Government will **reinvigorate the National Exercising Programme** to bring together key partners to stress test our plans, structures and skills and embed lessons captured into our doctrine and standards. Previously the NEP focused on civil contingency emergencies caused by natural events (e.g. flooding) or accidents (a plane crash). Following the IR, it is recognised the NEP should also test the UK Government’s capacity to manage civil contingencies emergencies caused by,<sup>57</sup> and impacted by<sup>58</sup> malign state activity.
- 204. To reflect this, the NEP will now be designed to test rigorously the concept of operations from the coordinated central response through the range of lead government department responsibilities and the involvement of the devolved administrations, from government to local responders. The NEP will complement existing resilience exercising conducted by UK Government departments, local authorities and the emergency services for specific risks.

## Civil Service Crisis Skills and Resource

- 205. During a crisis, the Civil Service must be able to draw on the skills and experience that it needs. Within the UK Government and DAs, there are already thousands of crisis management and subject matter experts that can act when an emergency happens. But there are times when a risk impacts so widely, or requires niche or specialist knowledge, that the UK Government needs to be able to quickly access different or additional support. When this happens, we must be able to work with those partners quickly and efficiently, integrating them seamlessly into our response. Some of this knowledge and experience is held by those who used to be civil servants, and some of it is held within the private sector.
- 206. Rapid re-prioritisation within the Civil Service was required during COVID-19. 40,000 FTEs worked in COVID-19 roles across the Civil Service, covering a hugely diverse range of activity. Whilst some COVID-19 roles were filled through recruitment, many more were filled by existing Civil Servants, through internal redeployment within departments or re-focussing existing roles on the COVID-19 response. The UK Government Resourcing Hub in Civil Service Human Resources facilitated short-term loans between departments, with almost 3,000 individuals moving across government to fill COVID-19 roles. Although there was immense flexibility and capability within government, this is not a sustainable approach, as other work programmes were paused or cancelled as a result of this surge. It was also common for departments to report similar resourcing gaps.
- 207. One of the success stories of the COVID-19 pandemic was the NHS Reserve. The approach was piloted by eight early adopter Integrated Care Systems in different regions of England, in response to the need to develop an additional emergency preparedness workforce to support surge demand. The early adopter pilots recruited over 17,000 individuals and since August 2020 have on boarded an additional 1,307

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57 For example, a Hostile State attacking UK communications infrastructure in support of a military or political objective

58 For example, a Hostile State using cyber to disrupt emergency services operations, or malicious communications to reduce public cooperation with emergency services and authorities in a crisis.

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reservists. All remaining Integrated Care Systems are currently working to set up local reserve programmes as part of a national roll-out and these are forecast to grow the national reserve pool by around 10,000 by March 2023.

208. The *Integrated Review* recognised the need for a reserve to enable ‘access to people with the right skills, experience and security clearances to form flexible, diverse and multidisciplinary teams’.<sup>59</sup> The 2020 Boardman Review of pandemic procurement also recommended that ‘there should be a cadre of retired and current Senior Civil Servants trained for crisis management who can be brought in to head up a crisis team as senior leaders’.<sup>60</sup> The UK Government will continue to consider options to ensure that it is able to quickly draw on the expertise and resources that it needs during a crisis. This will be a common theme across the resilience system.

### Applicability across the UK

At the time of publication, it is anticipated that:

- The UK Resilience Academy will be fully accessible to all partners including from the devolved administrations. However, it will not replace any training or skills-building in the DAs, and attendance at UKRA courses would not be compulsory. Similarly, any new training and skills pathway would be available in the devolved administrations, but would not be compulsory or replace existing activities.
- The NEP will work closely with the DAs. While DAs remain responsible for assuring their own contingency plans, the NEP will work with DAs on exercising for scenarios that cross borders and jurisdictions.

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59 [Global Britain in a Competitive Age: the Integrated Review of Security, Defence, Development and Foreign Policy](#)

60 [Findings of the Boardman review into pandemic procurement](#)

# Annex A: The Devolved Administrations and Resilience

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209. In Scotland, Wales and Northern Ireland, where a matter is devolved (such as flood defence), the administration in that nation leads planning, preparation, crisis response and recovery for these areas. In practice, where a crisis in a devolved policy area spans across borders, the relevant devolved administration(s) and the UK Government will work together to respond and recover. This can be further complicated where a risk is a reserved matter (for example, energy policy), but the impacts of that risk (for example, the impact of energy failure on schools) is devolved. Therefore all resilience work between the four nations must include a partnership approach.
210. In each DA, resilience arrangements, systems and processes have developed to reflect local requirements.
211. In Scotland, the Scottish Resilience Partnership (SRP) is a core group of the most senior statutory responders and key resilience partners. The SRP acts as a strategic policy forum for resilience issues. It provides collective assurance to Scottish Ministers, statutory responders and key partners. It also gives advice to the resilience community on how best to ensure that Scotland is prepared to respond effectively to major emergencies. Resilience is delivered through three Regional Resilience Partnerships which are established by regulation. They work with twelve Local Resilience Forums. Guidance on the principles, good practice and guidance on specific resilience matters is set out in a suite of guidance called Preparing Scotland.
212. In Wales, strategic issues of emergency preparedness are considered at the Wales Resilience Forum (WRF) Chaired by the First Minister. The WRF provides a national forum for multi-agency strategic discussion and assurance for Welsh Ministers on civil contingencies and emergency planning. Local Resilience Forums (LRF), like their English counterparts, are the principal mechanism for multi-agency cooperation on resilience. The Welsh Government is currently undertaking a review of Civil Contingencies Governance structures in Wales. This will inform the Welsh Government's approach to strengthening civil contingencies in Wales to enable delivery of the most effective model of multi-agency emergency preparedness and response across Wales.
213. The Civil Contingencies Group (CCG) (Northern Ireland) is the strategic-level multi-agency forum for the development, discussion and agreement of civil contingencies, preparedness and resilience policy for the Northern Ireland public sector. The Northern Ireland Emergency Preparedness Group, as a Sub Group of CCG (NI), oversees the work of the three Emergency Preparedness Groups at the local level and also acts as a conduit to escalate issues to the strategic level. Civil Contingencies guidance and the principles underpinning preparing for, responding to, and recovering from emergencies, are provided in the Northern Ireland Civil Contingencies Framework – Building Resilience Together.

## Annex B: Summary of Framework actions

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The UK Government is already taking action by:

Theme	Actions
Risk	<ul style="list-style-type: none"> <li>• Refreshing the NSRA process, so it will look over a longer timescale, include multiple scenarios, look at chronic risks and interdependencies and use the widest possible range of relevant data and insight alongside external challenge. The NSRA was updated in 2022 based on the new methodology.</li> <li>• Creating a new Head of Resilience, to guide best practice, encourage adherence to standards, and set guidance.</li> </ul>
Responsibilities and Accountability	<ul style="list-style-type: none"> <li>• Strengthening UK Government resilience structures by creating a new resilience function to deliver longer term capability building and risk mitigation to work alongside the UK Government’s crisis management infrastructure.</li> </ul>
Partnerships	<ul style="list-style-type: none"> <li>• Continuing to take international, bilateral and multilateral action and cooperation on risk and resilience. Continue to use the UK Government’s international action to identify and tackle risks before they manifest.</li> </ul>
Communities	<ul style="list-style-type: none"> <li>• Continuing to deepen and strengthen its relationships with the Voluntary and Community Sector in England</li> </ul>

By 2025, the UK Government is committing to take the following actions:

Theme	Actions
Risk	<ul style="list-style-type: none"> <li>• Clarify roles and responsibilities in the UK Government for each NSRA risk, to drive activity across the risk lifecycle.</li> <li>• Conduct an annual survey of public perceptions of risk, resilience and preparedness.</li> <li>• Introduce an Annual Statement to Parliament on civil contingencies risk and the UK Government's performance on resilience.</li> <li>• Develop a measurement of socio-economic resilience, including how risks impact across communities and vulnerable groups – to guide and inform decision making on risk and resilience.</li> </ul>
Responsibilities and Accountability	<ul style="list-style-type: none"> <li>• Expand the scope and use of standards and assurance in the public sector to support better contingency planning and risk management.</li> <li>• Run a pilot across three key pillars of reform to significantly strengthen LRFs in England: Leadership, Accountability, and Integration of resilience into the UK's levelling up mission.</li> </ul>
Partnerships	<ul style="list-style-type: none"> <li>• Grow the UK Government's advisory groups made up of experts, academics and industry experts in order to inform the NSRA. This may include establishing a risk-focused sub-group of the UK Resilience Forum.</li> </ul>
Skills	<ul style="list-style-type: none"> <li>• Deliver a new UK Resilience Academy, built out from the Emergency Planning College, making world class professional training available to all that need it.</li> <li>• Deliver a new training and skills pathway to drive professionalism and support all those pursuing a career in resilience.</li> <li>• Reinvigorate the National Exercising Programme to test plans, structures and skills.</li> </ul>
Communities	<ul style="list-style-type: none"> <li>• Offer further guidance from the UK Government to LRFs and local partners in England, created with local responders, the VCS and communities to support them working with vulnerable groups.</li> </ul>

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By 2030, the UK Government will:

Theme	Strategic deliverable
Risk	<ul style="list-style-type: none"><li>• Develop proposals to make the UK Government’s communications on risk more relevant and easily accessible.</li></ul>
Responsibilities and Accountability	<ul style="list-style-type: none"><li>• Work across three key pillars of reform to significantly strengthen LRFs in England: Leadership, Accountability, and Integration of resilience into the UK’s levelling up mission.</li></ul>
Partnerships	<ul style="list-style-type: none"><li>• Introduce standards on resilience across the private sector, where these do not already exist, adjusted to take into account the current landscape, priorities and needs across and between sectors.</li><li>• Provide the wider private sector with better guidance on resilience to support contingency planning and risk management.</li><li>• Build upon existing resilience standards for CNI to create common but flexible resilience standards across CNI, and do more on the assurance of CNI preparedness.</li><li>• Review existing regulatory regimes on resilience to ensure they are fit for purpose. In the highest priority sectors that are not already regulated, and for the highest priority risks, consider enforcing standards through regulation.</li></ul>
Investment	<ul style="list-style-type: none"><li>• Have a coordinated and prioritised approach to investment in resilience within the UK Government, informed by a shared understanding of risk.</li><li>• Consider options for funding models for any future expanded responsibilities and expectations of LRFs in England.</li><li>• Offer new guidance to community organisations and individual householders, to help those people to make more informed decisions about investing in their own resilience and preparedness.</li></ul>

### Equalities Considerations of the Deliverables

The Resilience Framework is an outline of, and commitment to, a range of measures and policies that will go through further development and implementation. The equality implications of those will continue to be assessed and monitored accordingly by those leading on development and implementation.

## Annex C: Evidence and Engagement

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214. This annex sets out our approach to building the evidence base for this framework. The ambition was to root the framework in the best available evidence, analysis and expertise, drawing on a diverse range of high-quality sources.

215. To achieve this ambition, the UK Government undertook a systematic programme of engagement, analysis and challenge. The UK Government established new processes and products where these were needed to address gaps and better inform decision-making. Lessons learned during the process will inform our approach at the implementation stage.

### Approach

216. This programme was designed to support each stage of the framework development and drafting process. This involved working with government departments and agencies, the UK's overseas networks, and experts, practitioners and partners from the risk and resilience sector. In particular, the UK Government sought to:

- Agree common understandings and agree the scope for the framework.
- Establish the current risk and resilience landscape and identify potential models to follow.
- Identify priority areas for policy development.

### Evidence base

217. The framework looked across a range of reports and projects from varying sources to help formulate and inform policy. Amongst others, these included:

- Government departmental reports
  - Integrated Operating Concept (2021)
  - Government Science Foresight Project: Technology and Innovation (2017)
  - BEIS: Storm Arwen Response Interim Review (2022)
- External and government partnership reports
  - The Centre for Long Term Resilience: Future Proof, The Opportunity to Transform the UK's Resilience to Extreme Risks (2021)
  - Civil Contingencies Resilience Strategy for Northern Ireland 2020-2025
  - Greater Manchester Resilience Strategy 2020-2030 (2021)
  - Grenfell Tower Inquiry: Phase 1 Report (2019)
  - House of Lords Risk Committee: Preparing for Extreme Risks, Building a Resilient Society (2021)

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- Joint Committee for National Security Strategy: Biosecurity and National Security (2020)
- Joint Committee for National Security Strategy: The UK's National Security Machinery (2021)
- Leeds Beckett University: Research into Community Resilience, A place-based case study approach England, Wales, Scotland and Northern Ireland (2021)
- London Resilience Partnership: Chronic Incident Review (2021)
- Manchester Arena Inquiry Volume 1: Security for the Arena (2021)
- National Audit Office: The Government's Preparedness for the COVID-19 Pandemic: Lessons for Government on Risk Management (2021)
- National Preparedness Commission: Building Better Resilience (2020)
- National Preparedness Commission: Independent Review of the 2004 Civil Contingencies Act (2022)
- National Infrastructure Commission Report: Anticipate, React, Recover, Resilient Infrastructure Systems (2019)
- RAND Europe: Enhancing Defence's Contribution to Societal Resilience in the UK, Lessons from International Approaches (2021)
- Royal Society of Edinburgh: Response to the House of Lords Risk Assessment and Risk Planning Committee Enquiry (2021)
- Royal Academy of Engineering: Resilience, Building UK Capability and Considering Interdependencies.
- St John Ambulance: Ask Us About Our Million Hours, St John People on their Million Hours and how we built a Lasting Legacy of Emergency Resilience (2021)
- International reports and frameworks
  - The Australian Government: Royal Commission into Natural Disaster Arrangements (2020)
  - Government of Canada: Emergency Management Strategy for Canada, Toward a Resilient 2030 (2019)
  - New Zealand Government: National Disaster Resilience Strategy (2019)
  - Norwegian Directorate for Civil Protection: Analyses of Crisis Scenarios (2019)
  - Organisation for Economic Co-operation and Development: Resilience Strategies and Approaches to Contain Systematic Threats (2019)
  - United Nations Office for Disaster Risk Reduction: Sendai Framework for Disaster Risk Reduction 2015-2030 (2015)
- Devolved administrations frameworks
  - Northern Ireland Civil Contingencies Framework (2021)



## Engagement

218. The UK Government designed engagement to bring in different perspectives and policy ideas from across the UK and around the world, adapted the programme in light of COVID-19 to make full use of online platforms and issued a public call for evidence.
219. **Public Engagement:** On 13 July 2021, the UK Government launched a public Call for Evidence. Contributions were invited on a range of security, defence, development and foreign policy questions. The UK Government received almost 400 submissions from individuals and organisations. A wide range of individuals and organisations submitted responses, including from industry; non-governmental organisations; international organisations, academia; community groups; think tanks; local government; local resilience forums; insurance companies; business and continuity teams in critical national infrastructure companies; and fire and police organisations. The UK Government reviewed and catalogued the submissions, which were fed into the development of this framework.
220. **Sector Engagement:** During the summer of 2021 the UK Government undertook an extensive programme of engagement and evidence gathered with LRFs in England and their partners. This “Big Resilience Conversation” was extremely well supported by a wide range of partners and we are grateful for their highly positive and constructive engagement.
221. **Experts and Practitioners:** The Call for Evidence was launched publicly on 13 July 2021 via a speech given by the Paymaster General to the Royal United Services Institute. The UK Government subsequently consulted over 1000 stakeholders in a series of engagement events, including businesses, charities, academics and other experts.
222. **Departmental & International Engagement:** a wide range of government departments were consulted, as well as UK missions overseas and our international partners, all of which informed inputs into this framework. The UK Government consulted departments on their areas of policy and delivery responsibility, and also engaged with the UK Delegation to NATO to better understand the role that can be played by multilateral organisations, and held discussions with international delegations.
223. **Devolved Administrations Engagement:** the UK Government engaged with the devolved administrations and territorial offices to understand arrangements in the Devolved Administrations and learn from good practice already in use. This was achieved through a series of regular contact groups and 1:1 engagements with individual administrations.
224. **Parliamentary Engagement:** the UK Government reviewed a number of parliamentary reports to ensure that relevant recommendations were recognised and reflected in this framework. This included the National Security Inquiry Report on Biosecurity and National Security, and the House of Lords Select Committee on Risk Assessment and Risk Planning Report: Preparing for Extreme Risks – Building a Resilient Society. In the process of developing this framework, officials briefed the Parliamentary Accounts Committee.

### Challenge

225. The UK Government put in place challenge processes to test our assumptions and emerging thinking during the framework development process. This included ensuring that the analysis of the responses to the call for evidence was led by professional analysts, and having regular challenge sessions to allow the scope and key assumptions of this framework to be challenged at the development stage.

## Annex D: Acronyms and definitions

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Term	Definition
<b>Acute risk</b>	Time-bound, discrete events, for example a major fire or a terrorist attack. Contrast with Chronic risks.
<b>Cabinet Office Briefing Rooms (COBR)</b>	The Cabinet Office Briefing Rooms provide the coordination mechanism through which the UK Government responds quickly to emergencies that require decisions urgently (set out in the UK Government's concept of operations <sup>61</sup> ). Ministers and senior officials are brought together in COBR to ensure a common appreciation of the situation and to facilitate effective and timely decision making in responding to domestic and international emergencies affecting UK interests.
<b>Capabilities</b>	In this context, capabilities means the organisations, tools, data, legislation or resources required to respond to risks. There are both specific capabilities, which are needed to manage specific risks, as well as generic ones which can be used to respond flexibly to multiple risks. Specific capabilities could include specialist equipment used to pump water or measure water speed during flood events. Generic capabilities include evacuation and shelter capability, and the emergency services.
<b>Cascading risk</b>	This term refers to the knock-on impacts of a risk that cause further physical, social or economic disruption. For example, severe weather could cause flooding, which then causes damage to electricity infrastructure, resulting in a power outage which then disrupts communications service providers (and so on).
<b>Catastrophic risk</b>	Those risks with the potential to cause extreme, widespread and/or prolonged impacts, including significant loss of life, and/or severe damage to the UK's economy, security, infrastructure systems, services and/or the environment. Risks of this scale would require coordination and support from UK Government. Examples include: the widespread dispersal of a biological agent, severe flooding, or the detonation of an improvised nuclear device.

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61 [The central government's concept of operations – GOV.UK](https://www.gov.uk/government/concept-operations)

Term	Definition
<b>Category 1 and 2 Emergency Responder</b>	<p>The Civil Contingencies Act divides those with duties for emergency preparation and response at the local level into two groups (Category 1 and Category 2 responders), each with different duties.</p> <p>Category 1 responders are those at the core of most emergencies and include: the emergency services, local authorities, some NHS bodies.</p> <p>Category 2 responders are representatives of organisations less likely to be at the heart of emergency planning but who are required to co-operate and share information with other responders to ensure that they are well integrated within wider emergency planning frameworks. They will also be heavily involved in incidents affecting their sector. Category 2 organisations include: the Health and Safety Executive, Highways Agency, transport and utility companies.</p>
<b>Chronic risk</b>	<p>Continuous challenges which gradually erode our economy, community, way of life and/or national security (e.g. money laundering; antimicrobial resistance). Contrast with Acute risks.</p>
<b>Civil contingencies</b>	<p>Planning and preparation for events or incidents with the potential to impact ordinary citizens and their interests.</p>
<b>Civil Contingencies Act (CCA) 2004</b>	<p>The framework for civil protection in the UK. The CCA identifies and establishes a clear set of roles and responsibilities for those involved in emergency preparation and response at the local level. It also allows for the making of temporary special legislation (emergency regulations) to help deal with the most serious of emergencies.</p>
<b>Civil Contingencies Group (Northern Ireland)</b>	<p>The Civil Contingencies Group (Northern Ireland) is the strategic-level multi-agency forum for the development, discussion and agreement of civil contingencies, preparedness and resilience policy for the Northern Ireland public sector.</p>
<b>Compound risk</b>	<p>When two or more events coincide (either in the same place, or at the same time) causing impacts greater than the sum of the individual risks. An example could be flooding impacting an area that is already experiencing a power outage.</p>
<b>Crisis</b>	<p>An event or series of events that represents a critical threat to the health, safety, security, or well-being of a community or other large group of people usually over a wider area.</p>

Term	Definition
<b>Critical National Infrastructure (CNI)</b>	National Infrastructure is those facilities, systems, sites, information, people, networks and processes, necessary for a country to function and upon which daily life depends. It also includes some functions, sites and organisations which are not critical to the maintenance of essential services, but which need protection due to the potential danger to the public (civil nuclear and chemical sites for example). Critical National Infrastructure is a subset of National Infrastructure which, if damaged, would have major impacts on a national scale.
<b>Emergency</b>	An emergency is defined as: <ul style="list-style-type: none"> <li>• An event or situation which threatens serious damage to human welfare, or to the environment; or</li> <li>• War, or terrorism, which threatens serious damage to security</li> </ul>
<b>Hazard</b>	Hazards are non-malicious risks such as extreme weather events, accidents or the natural outbreak of disease. Contrast with Threat.
<b>Local Resilience Forum (LRF)</b>	LRFs are multi-agency partnerships made up of representatives from local public services, including the emergency services, local authorities, the NHS, the Environment Agency and other organisations involved in emergency preparedness.  These agencies are known as Category 1 and 2 Responders (except in Northern Ireland), as defined by the Civil Contingencies Act.  The CCA and the Regulations provide that responders, through the Local Resilience Forum, have a collective responsibility to plan, prepare and communicate in a multi-agency environment.
<b>Local Responder, Local authorities and responder agencies</b>	Local responders and local responder agencies include both category 1 and category 2 responders as defined in the Civil Contingencies Act 2004. In the context of the devolved administrations, this can also refer to national agencies such as the Police Service of Northern Ireland, the Welsh Ambulance Service and the Scottish Fire and Rescue Service.
<b>Military Aid to the Civil Authorities (MACA)</b>	Military operations conducted in the UK and Crown Dependencies involving the employment of Defence resources as requested by a government department or civil authority. This is subject to Defence ministerial approval, either prior to, or at the time of an event. <sup>62</sup>

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62 [JDP 02](#)

Term	Definition
<b>Malicious risk</b>	Risks characterised by deliberate human intent to cause harm or disruption. These risks can come from individuals, groups or States. Examples include: terrorism; serious and organised crime; and hostile activity by foreign states.
<b>National Security Risk Assessment (NSRA)</b>	The NSRA assesses, compares and prioritises the top national level risks facing the UK, focusing on both likelihood of the risk occurring and the impact it would have, were it to happen. It is the main tool for assessing the most serious civil contingencies risks facing the UK.
<b>National Risk Register (NRR)</b>	The NRR is the publicly available counterpart of the NSRA, aimed at providing detailed information for those with formal contingency planning responsibilities at a national and local level.
<b>Non-malicious risk</b>	Risks characterised by natural or accidental causes. Examples include: industrial accidents; extreme weather; and human and animal disease.
<b>Northern Ireland Emergency Preparedness Group</b>	The Northern Ireland Emergency Preparedness Group, is a SubGroup of Civil Contingencies Group (NI) and oversees the work of the three Emergency Preparedness Groups at the local level and acts as a conduit to escalate issues to the strategic level.
<b>Recovery Coordinating Group (RCG)</b>	It is recommended that the Recovery Coordinating Group (RCG) is set up on the first day of the emergency and run in parallel with the Strategic Coordinating Group (SCG). Activation of the Recovery Coordinating Group (RCG) is initiated by the local authority, usually following a request by/agreement with the Strategic Coordinating Group (SCG). The RCG reports into the SCG until the SCG stands down.
<b>Regional Resilience Partnership (in Scotland)</b>	Resilience in Scotland is delivered through three Regional Resilience Partnerships which are established by regulation. They work with twelve Local Resilience Forums.
<b>Resilience</b>	The UK's ability to anticipate, assess, prevent, mitigate, respond to, and recover from natural hazards, deliberate attacks, geopolitical instability, disease outbreaks, and other disruptive events, civil emergencies or threats to our way of life.
<b>Risk</b>	An event, person or object which could cause loss of life or injury, damage to infrastructure, social and economic disruption or environment degradation. The severity of a risk is assessed as a combination of its potential impact and its likelihood. The Government subdivides risks into: hazards and threats.

Term	Definition
<b>Risk appetite</b>	The amount of risk an individual, business, organisation or government is willing to tolerate.
<b>Risk-agnostic</b>	Describes the ability of a capability, process or response to address ‘common’ impacts of risks (i.e. those impacts that occur across multiple scenarios). For example, major fires, terrorist incidents and flooding are all likely to produce mass casualties; developing capabilities to handle mass casualties is, therefore, a risk-agnostic approach.
<b>Risk life cycle</b>	A conceptual model that breaks the management of a risk down into stages at which different preparatory actions can be taken. The UK Government is using six stages: anticipation, assessment, prevention, preparation, response and recovery.
<b>Scottish Resilience Partnership (SRP)</b>	The Scottish Resilience Partnership (SRP) is a core group of the most senior statutory responders and key resilience partners. The SRP acts as a strategic policy forum for resilience issues. It provides collective assurance to Scottish Ministers, statutory responders and key partners. It also gives advice to the resilience community on how best to ensure that Scotland is prepared to respond effectively to major emergencies.
<b>Strategic Coordinating Groups (SCGs)</b>	Some disruptive events or emergencies require strategic multi-agency coordination at the local level (e.g. a major flood event). This is carried out by a Strategic Coordinating Group (SCG) in England, which can be activated by any responder organisation represented on the LRF. The SCG takes overall responsibility for the multi-agency management of the incident and establishes a strategic framework within which lower levels of command and coordinating groups will work. SCGs are usually chaired by the Police.
<b>Subsidiarity</b>	The principle whereby decisions are taken at the lowest appropriate level, with coordination at the highest necessary level. In practice this means that most incidents are handled within the capabilities of local agencies and responders, without central involvement.
<b>Systemic vulnerability</b>	Economic, societal, environmental and infrastructural factors that make a system more prone or vulnerable to the impacts of hazards or threats.
<b>Threat</b>	Malicious risks such as acts of terrorism, hostile state activity and cyber crime. Contrast with Hazard.
<b>Upstream risk</b>	Risks occurring in or affecting other countries, or in ungoverned spaces (including the oceans, space and cyberspace), which may then evolve to affect the UK.

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Term	Definition
<b>Vulnerability</b>	The quality or state of being more prone or exposed to the impacts of hazards or threats. Vulnerabilities could affect individuals, communities, assets or a whole system and may be caused by physical, social, economic and environmental factors or processes.
<b>Wales Resilience Forum (WRF)</b>	In Wales, strategic issues of emergency preparedness are considered at the Wales Resilience Forum (WRF) Chaired by the First Minister. The WRF provides a national forum for multi-agency strategic discussion and assurance for Welsh Ministers on civil protection and emergency planning.



## Annex E: A (brief) history of Resilience

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226. Resilience is a concept that has evolved over the last 100 years. During this time the UK has gradually moved from civil defence (a focus on war risks, with some spillover benefits) to Integrated Emergency Management (IEM, an all-hazards approach driven by risk assessment) to Resilience (preparedness for effects across networked systems). And in each case, embedding change has taken years.
227. Modern emergency powers have their roots in the post-WWI desire to be able to tackle any threat to the state, and to recognise broader civil contingency risks beyond the war. In the period running up to WWII, this early concept of emergency planning remained focussed on security, but did include consideration of critical supply chains and risks to national infrastructure. The expansion of this to include civil contingency risks, and to give local responders official responsibilities came just before the outbreak of WWII, and naturally focussed on protecting local communities from the impacts of war.
228. After the war, civil defence continued to develop to include smaller scale civil crises, including the widespread disruption caused by strikes in the 1970s. But as the risks facing the UK evolved and adapted in the post-war period, so did our approach to tackling them. It would not be until the 1980s that a new concept of IEM emerged, taking a broader risk-based approach to the whole range of hazards that faced the UK. This was adapted further in the early 2000s into a new Resilience approach, partly driven by the 9/11 attacks.
229. Now, IEM and Resilience are systems that are employed across the world. IEM forms the basis of work in most developed countries. The UK was an outlier when it adopted Resilience in the 2000s, but it is now common practice internationally. But the key deficiency with each of these approaches has been the inability to get ahead of problems – to tackle them at source.
230. The UK cannot and should not abandon IEM and Resilience. But expanding the concept of resilience means that **instead of simply recognising that emergencies run across networks and systems, we reduce the risks in those systems in the first place.**
231. This will take a huge shift and this framework is only the start. But just as the UK's drive on Resilience transformed preparedness two decades ago by shifting engagement and focus, this framework provides a starting point to refocus and extend the civil protection system and beyond towards reducing the UK's risk profile and building resilience.

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**Cleaner and Greener Advisory Committee - 13 June 2023 - Work Plan (as at 16/05/23)**

**10 October 2023**

- Out of Hours Options Report
- EV Charging Study

**23 November 2023**

**22 February 2024**

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