Lincolnshire COUNTY COUNCIL
Working for a better future

County Offices
Newland
Lincoln
LN1 1YL

25 May 2018

Executive

A meeting of the Executive will be held on **Tuesday, 5 June 2018** in **Committee Room One, County Offices, Newland, Lincoln LN1 1YL** at **10.30 am** for the transaction of business set out on the attached Agenda.

Yours sincerely

Richard Wills
Head of Paid Service

Membership of the Executive
(8 Members of the Council)

Councillor M J Hill OBE, Executive Councillor for Resources and Communications (Leader of the Council)

Councillor Mrs P A Bradwell, Executive Councillor for Adult Care, Health and Children's Services (Deputy Leader)

Councillor C J Davie, Executive Councillor for Economy and Place

Councillor R G Davies, Executive Councillor for Highways, Transport and IT

Councillor E J Poll, Executive Councillor for Commercial and Environmental Management

Councillor Mrs S Woolley, Executive Councillor for NHS Liaison and Community Engagement

Councillor C N Worth, Executive Councillor for Culture and Emergency Services

Councillor B Young, Executive Councillor for Community Safety and People Management

EXECUTIVE AGENDA
TUESDAY, 5 JUNE 2018

Item	Title	Forward Plan Decision Reference	Pages
1	**Apologies for Absence**		
2	**Declarations of Councillors' Interests**		
3	**Announcements by the Leader, Executive Councillors and Executive Directors**		
4	**Minutes of the Meeting of the Executive held on 1 May 2018**		5 - 12
NON KEY DECISIONS - ITEMS TO BE RESOLVED BY THE EXECUTIVE			
5	**Annual Report of the Director of Public Health on the health of the people of Lincolnshire 2017** *(To receive a report from the Director of Public Health, which invites the Executive to receive the Annual Report on the Health of the People of Lincolnshire from the Interim Director of Public Health and consider the recommendations included in each chapter)*	**I015798**	13 - 58
6	**Representation on Outside Bodies** *(To receive a report from the Executive Director of Environment and Economy, which invites members to consider the Outside Body List applicable to the Executive as detailed at Appendix A, and to note the appointment changes by the Leader and Executive Councillors since 6 June 2017, as detailed at Appendices B and C to the report)*	**I015730**	59 - 72
ITEMS REFERRED FROM OVERVIEW AND SCRUTINY COMMITTEES			
7	**Impact of the Part Night Street Lighting Policy Scrutiny Review - Final Report** *(To receive a report from the Director responsible for Democratic Services, which invites the Executive to consider the scrutiny review on the Impact of the Part Night Street Lighting Policy and to make arrangements to respond to the report by 5 September 2018)*		73 - 118

Democratic Services Officer Contact Details

Name:	**Cheryl Hall**
Direct Dial	**01522 552113**
E Mail Address	cheryl.hall@lincolnshire.gov.uk

Please Note: for more information about any of the following please contact the Democratic Services Officer responsible for servicing this meeting

- Business of the meeting
- Any special arrangements
- Copies of reports

Contact details set out above.

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www.lincolnshire.gov.uk/committeerecords

Lincolnshire COUNTY COUNCIL
Working for a better future

EXECUTIVE
1 MAY 2018

PRESENT: COUNCILLOR M J HILL OBE (LEADER OF THE COUNCIL)

Councillors Mrs P A Bradwell (Executive Councillor for Adult Care, Health and Children's Services) (Deputy Leader), C J Davie (Executive Councillor for Economy and Place), R G Davies (Executive Councillor for Highways, Transport and IT), E J Poll (Executive Councillor for Commercial and Environmental Management), Mrs S Woolley (Executive Councillor for NHS Liaison and Community Engagement), C N Worth (Executive Councillor for Culture and Emergency Services) and B Young (Executive Councillor for Community Safety and People Management).

Councillors R B Parker (Chairman of Overview and Scrutiny Management Board) and M A Whittington (Executive Support Councillor for Resources and Communications) were also in attendance.

Officers in attendance:-

Debbie Barnes (Executive Director, Children's Services), Jason Davenport (Payroll Consultant), Glen Garrod (Executive Director of Adult Care and Community Wellbeing), Cheryl Hall (Democratic Services Officer), Stephen Jack (Lincolnshire Wolds Countryside Service Manager), Andrew McLean (Service Manager Commissioning), Chris Miller (Team Leader for Countryside Services), Pete Moore (Executive Director, Finance and Public Protection), Sophie Reeve (Chief Commercial Officer), Nigel West (Head of Democratic Services and Statutory Scrutiny Officer) and Richard Wills (Head of Paid Service and Executive Director, Environment and Economy).

71 APOLOGIES FOR ABSENCE

There were no apologies for absence.

72 DECLARATIONS OF COUNCILLORS' INTERESTS

There were no declarations of interest.

73 ANNOUNCEMENTS BY THE LEADER, EXECUTIVE COUNCILLORS AND EXECUTIVE DIRECTORS

There were no announcements.

74 MINUTES OF THE MEETING OF THE EXECUTIVE HELD ON 4 APRIL 2018

RESOLVED

That the minutes of the meeting of the Executive held on 4 April 2018 be signed by the Chairman as a correct record.

75 CORPORATE SUPPORT SERVICES RE-PROVISION

Consideration was given to a report from the Executive Director of Children's Services, which summarised the work undertaken in reviewing the future provision of those services delivered by Serco under the Corporate Support Services contract when the initial term expires at the end of March 2020.

Sophie Reeve (Chief Commercial Officer), Andrew McLean (Chief Commissioning Officer), John Wickens (Head of IMT) and Jason Davenport (Payroll Consultant) were in attendance for this item.

The Chief Commercial Officer introduced the report which provided the Executive with the following information:-

- Background;
- Performance;
  - Overview;
  - Key Performance Indicators (KPIs);
  - Market alternatives to an extension of the Contract;
  - Business Process Outsourcing Contracts;
  - Insourcing;
  - Business World On (formerly known as Agresso);
  - Payroll and People Management (PM) Administration Services;
  - Hoople Limited
  - IT; and
  - Customer Services Centre, Finance and People Management (PM) Services.

The Chairman of the Overview and Scrutiny Management Board advised that the Board had considered a report concerning the Corporate Support Services Re-provision at its meeting on 26 April 2018. The Board unanimously:

- Provided full support for recommendations (i), (iv) and (v) as detailed in the Executive report;
- Provided qualified support for recommendations (ii) and (iii), as detailed in the Executive report;
- Recommended that a further report be brought to the Board's meeting on 28 June 2018 and the Executive on 3 July 2018 regarding the outcomes of the due diligence process with Hoople Limited in relation to the payroll system and

the governance arrangements of the shared service arrangement, before entering into a shared service arrangement with Herefordshire County Council;
- It was suggested that the newly appointed Chief Executive's views should be taken into account when looking at options.

It was reported that Lincolnshire Unison had submitted comments on the Corporate Support Services re-provision, which were read to the Executive. In particular, it was highlighted that Lincolnshire Unison had expressed a wish for Lincolnshire services to be provided by Lincolnshire-based employers.

The Leader suggested that the report was considered in three separate sections: Payroll; IT; and Customer Service Centre/Finance/People Management to give Members the opportunity to ask questions under each of those sections.

Payroll

A review of the market had identified that there were no private sector providers of local government payroll or people management administration outside the larger outsourcing contracts similar to the Council's contract with Serco. Two viable shared service partners had been identified, one of which was Herefordshire County Council via Hoople Limited.

The due diligence activities had comprised site visits in addition to scenario-based questions, audit inspections and a review of Information Governance and IT management arrangements. Based on these activities, the Payroll Consultant had strongly recommended Hoople Limited as the preferred partner for the Council.

Serco had stated that it would work collaboratively with Herefordshire County Council, Hoople, Unit 4, and Lincolnshire County Council to ensure a successful handover. Herefordshire also recognised that the payroll and people management partnering solution would need to include maintained schools. It was confirmed that Herefordshire County Council and Hoople Limited delivered payroll and people management administration to schools.

The Chairman of the Overview and Scrutiny Management Board presented the Board's comments in relation to the payroll aspect of the report, which had been tabled at the meeting.

Officers responded to the points highlighted by the Board and the questions raised by the Executive, as detailed below: -

- Assurances were provided that Herefordshire County Council had the ability to recruit sufficient numbers of trained payroll staff to cope with the size of Lincolnshire County Council's payrolls, increasing its staffing levels by 30%;
- It was noted that the overall level of assurance for payroll delivered by Hoople Limited was rated as 'reasonable' in an audit in 2017/18. The Executive was advised that 'reasonable' compared to 'substantial' in Lincolnshire County Council's assurance framework;

- It was confirmed that comprehensive work would be undertaken to ensure that the new payroll system was working effectively pre-transfer. Further to this, it was acknowledged that the data cleansing exercise, currently being undertaken by Serco, was essential in ensuring the successful transfer. It was confirmed that Hoople Limited would form part of the transition planning discussions;
- It was highlighted that due diligence was key to the success of the proposal. Further to this, it was confirmed that Hoople Limited was scheduled to visit Lincolnshire County Council in May 2018 to prepare the due diligence activity, with a plan for the due diligence work being available by the end of June 2018;
- Performance measures would form part of the partnership agreement between Lincolnshire County Council and Hoople Limited, to ensure the County Council could hold Hoople Limited to account;
- In respect of the complexity of Lincolnshire Fire and Rescue's payroll system, it was confirmed that tests on the firefighter payroll had been conducted and Herefordshire County Council had performed well. Herefordshire County Council had assured officers that they had the capability to build the Lincolnshire Fire and Rescue payroll into their current system; and
- The options for the location of the services provided by Hoople Limited were yet to be considered. It was reiterated that the Scrutiny Management Board's preference would be for the services to be provided from an office based in Lincolnshire.

Information Technology

The Executive was advised that a single supplier model was believed to be the only procurement model which would enable successful service transition by the current contract end in April 2020. Further work was required on market engagement to better understand the acceptable contract terms, model, service towers and general level of interest.

The Chairman of the Overview and Scrutiny Management Board presented the Board's comments in relation to the IT aspect of the report, which were tabled at the meeting.

Officers responded to the points highlighted by the Board and the questions raised by the Executive, as detailed below: -

- It was suggested that an Information Management Technology Strategy was produced, which set out the Council's strategic objectives in relation to IT. It was also suggested that this could be actioned by the newly-appointed Chief Executive;
- A systematic review had been undertaken by Unit 4 of the Council's current deployment of Business World On. Additionally, an independent business consultant had reviewed the payroll issues. Unit 4 advised that they had improved the system with each milestone release.

Customer Services Centre, Finance and People Management Services

People Management, Exchequer Services and much of Adult Care Finance and Assessments had been outsourced for 18 years and the Customer Services Centre had been outsourced since 2015.

The Executive was advised that the time required for insourcing was shorter and therefore no decision would be required for these services for some time. It was suggested that a better approach was to continue to monitor Serco's performance and consider an extension of this element of the current contract before making a final decision.
The Chairman of the Overview and Scrutiny Management Board presented the Board's comments in relation to the IT aspect of the report, which were tabled at the meeting.

It was noted that a report on further options in these areas would be presented to the Overview and Scrutiny Management Board at its meeting on 27 September 2018 and to the Executive on 2 October 2018.

RESOLVED

(1) That the report be noted.

(2) That approval be given to the entering into of a shared service arrangement under section 9EA of the Local Government Act 2000 and Regulation 5 of the Local Authorities (Arrangement for the Discharge of Functions) (England) Regulations 2012 for the exercise by Herefordshire County Council or, as the case may be, the executive of Herefordshire County Council of the Council's payroll and People Management Administration function from 1 April 2020, subject to satisfactory assurances being received; and

(3) That approval be given to the entering into of a public-public co-operation with Herefordshire County Council to provide access to Hoople Limited's Business World ERP for Lincolnshire County Council's Finance function, accountancy, financial administration and Adult Care Finance services from the 1 April 2020, subject to satisfactory assurances being received.

(4) That the Executive Director of Children's Services, in consultation with the Leader of the Council and the Executive Councillor for Community Safety and People Management, be delegated authority to take all decisions necessary to ensure the entering into of the above shared service arrangements described in (2) and (3) above to include the entering into of the shared service agreement itself and delivery of services from the 1 April 2020 but only once the requirements of paragraph 40 of the Report have been met.

(5) That approval be given to the carrying out of market engagement and all ancillary activity with IT providers.

76 FORMAL ADOPTION OF THE LINCOLNSHIRE WOLDS AREA OF OUTSTANDING NATURAL BEAUTY MANAGEMENT PLAN 2018-2023

Consideration was given to a report from the Executive Director of Environment and Economy, which informed the Executive of the outcome of a review of the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan and set out the recommended changes to the Plan.

The Lincolnshire Wolds Countryside Service Manager advised that under the Countryside and Rights of Way Legislation (CROW Act 2000), the County Council had a statutory duty to produce and review a five yearly management plan for the Lincolnshire Wolds AONB.

The Management Plan had four sections, which included: Protecting the Wolds; Discovering the Wolds; Sustaining the Wolds; and Making it Happen. There were 19 objectives; 78 policies and 180+ actions to help protect, enhance and promote the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB).

It was noted that the AONB Partnership was working hard to ensure that the new Plan provided a stimulus for the further protection and enhancement of the Lincolnshire Wolds, including a wide range of collaborative initiatives embracing public, private and third sector engagement.

It was advised that the Environment and Economy Scrutiny Committee had considered the draft AONB Management Plan at its meeting on 16 January 2018 and had endorsed the draft Management Plan with an acknowledgement that further changes may be required, following the conclusion of the public consultation.

Further to this it was noted that the Management Plan had been endorsed by the Lincolnshire Wolds Joint Advisory Committee at its meeting on 12 April 2018. Natural England had confirmed its approval and validation of the document, thus releasing the Plan for its formal adoption from all relevant local planning authorities.

Members were provided with an opportunity to ask questions, where the following points were noted: -

- It was also confirmed that the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan 2018-2023 would be published on the County Council's website, with a very small number of hard copies being made available owing to its size;
- A summary of the public consultation was detailed at Appendix 7b to the report;
- The Management Plan aimed to successfully balance land management interests to help support economic, social and environmental objectives for all;
- It was confirmed that the local community; residents and landowners had been engaged through the public consultation; and

- There was clarification that the final adopted Management Plan would be a material consideration in formal planning matters, in that the document would seek to complement the relevant Local Development Framework, Minerals and Waste Plans and other significant plans.

RESOLVED

(1) That the outcome of the review of the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan 2013-2018 and the changes proposed to the Plan as set out in the Report be noted.

(2) That the document, as detailed at Appendix A to the report, which incorporates the said changes as the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan 2018-2023 be formally adopted.

77 NHS SUSTAINABILITY AND TRANSFORMATION PLAN

A report from the Executive Director of Adult Care and Community Wellbeing and the Head of Paid Service was considered, which clarified the County Council's relationship with the NHS in Lincolnshire, both in terms of the services that were already delivered in partnership and the ongoing transformation and integration of health and care. In particular, the report set out the current position with respect to the County Council's role in the Sustainability and Transformation Plan.

It was highlighted that Sustainability and Transformation Plans (STPs) had been first introduced by NHS England in 2016 as a means of accelerating the implementation of its Five Year Forward View. The country had been divided by NHS England into 44 local STP areas in order to do this, with the four Lincolnshire Clinical Commissioning Groups forming the Lincolnshire STP footprint.

Members were provided with an opportunity to ask questions, where the following points were noted: -

- Concern was expressed that despite considerable effort being expended into producing a Lincolnshire plan for the Health and Care in the county, nothing substantive had yet emerged in the public domain since December 2016;
- It was commented that by having a published plan in place, it would provide certainty for the county, which could aid recruitment and retention within the local NHS;
- It was acknowledged that a draft STP had been published in December 2016, as part of a process overseen by NHS England who appeared to remain influential in the STP's development and implementation and it was suggested that clarity should be sought from NHS England on when an updated STP would be published; and
- There was a need to ensure that the views of all Lincolnshire residents were represented to support the provision of equitable services across the county, rather than focusing on Lincoln.

RESOLVED

(1) That the Executive expresses its concern that despite considerable effort being expended into producing a Lincolnshire plan for the Health and Care in the county over several years, nothing substantive has yet emerged in the public domain.

The Executive would urge NHS colleagues to publish a comprehensive draft plan for public consultation without delay. The County Council along with other individuals and organisations could then respond effectively in the interests of the residents of Lincolnshire.

(2) That the local NHS be advised that it remains the County Council's strong view that an external review of the governance arrangements for the Lincolnshire STP be undertaken to provide:

i. clarity of decision making and accountability
ii. a clear definition of the roles of the partners
iii. effective engagement with democratic processes
iv. robust oversight of the delivery of the STP plan and associated financial savings and changes in NHS expenditure

The meeting closed at 12.15 pm.

Lincolnshire COUNTY COUNCIL Working for a better future

Executive

Open Report on behalf of Derek Ward, Director of Public Health

Report to:	**Executive**
Date:	**05 June 2018**
Subject:	**Annual Report of the Director of Public Health on the health of the people of Lincolnshire 2017**
Decision Reference:	**I015798**
Key decision?	**No**

Summary:
The Annual Report on the Health of the People of Lincolnshire from the Director of Public Health (DPH) is an independent statutory report to Lincolnshire health and care authorities. The report raises issues of importance to the health of the population of Lincolnshire.

Recommendation(s):
That the Executive receive the Annual Report on the Health of the People of Lincolnshire from the Interim Director of Public Health and consider the recommendations included in each chapter.

Alternatives Considered: None

Reasons for Recommendation:
This is a statutory annual report and the Executive is asked to note its recommendations.

1. Background

One of the statutory duties of each local authority director of public health is to produce an independent report on the state of the health of the people they serve on an annual basis.

The report is produced by the DPH and his team as a product which is independent of the local authority but the best of these reports is produced in close consultation with colleagues across the local health and care system.

The 2017 DPH Annual Report covers two topics that are high on the agenda for local organisations locally:

- A chapter on the case for investing in prevention in support of the Lincolnshire Health and Care System's need to shift investment into proven prevention interventions

- A chapter renewing the focus on the biological and environmental threats to people's health and the systems in place to track these hazards and protect Lincolnshire people from harm.

The report is commended to the Executive for consideration, debate and commissioning of any actions they would like to see taken forward.

This report will be published electronically, and connected to the Joint Strategic Needs Assessment evidence warehouse as well as being presented to a range of NHS and local government bodies for consideration.

Its recommendations to the system of health and care organisations are:

1. The Sustainability and Transformation Partnership should review its approach to planning and investing in those areas of preventative service where evidence of effect is irrefutable.

2. Legal Issues:

Equality Act 2010

Under section 149 of the Equality Act 2010, the Council must, in the exercise of its functions, have due regard to the need to:

- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act
- Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it
- The relevant protected characteristics are age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation

Having due regard to the need to advance equality of opportunity involves having due regard, in particular, to the need to:

- Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic.
- Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.

- Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to tackle prejudice, and promote understanding.

Compliance with the duties in section 149 may involve treating some persons more favourably than others.

The duty cannot be delegated and must be discharged by the decision-maker. To discharge the statutory duty the decision-maker must analyse all the relevant material with the specific statutory obligations in mind. If a risk of adverse impact is identified consideration must be given to measures to avoid that impact as part of the decision making process.

The report actively seeks to explore and highlight inequalities in health status and make recommendations for how these could be addressed.

Joint Strategic Needs Analysis (JSNA and the Joint Health and Wellbeing Strategy (JHWS)

The Council must have regard to the Joint Strategic Needs Assessment (JSNA) and the Joint Health & Well Being Strategy (JHWS) in coming to a decision

This report is an independent professional view of the state of the health of the people of Lincolnshire by the Director of Public Health. It has, therefore, drawn from a wide range of evidence including, but not limited to, the JSNA.

Crime and Disorder

Under section 17 of the Crime and Disorder Act 1998, the Council must exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in its area (including anti-social and other behaviour adversely affecting the local environment), the misuse of drugs, alcohol and other substances in its area and re-offending in its area

Section 17 considerations were made as part of the research and development of this report, though no specific impacts were identified.

3. Conclusion

The statutory Annual Report of the Director of Public Health on the Health of the People of Lincolnshire has now been prepared and the Executive is asked to receive and note the recommendations included in each chapter.

4. Legal Comments:

Under section 73B of the National Health Service Act 2006, the Director of Public Health must prepare a report on the health of the people of the area and the Council must publish that report.

5.Resource Comments:

In 2017/18 Lincolnshire County Council's Public Health Grant allocation was £33.524m. The purpose of the grant is to provide the Council with the funding required to discharge its statutory public health duties and meet the public health needs of the local populations as per the conditions of the grant which are described in Local Authority Circular LAC(DH)(2016)3.

6. Consultation

a) Has Local Member Been Consulted?

n/a

b) Has Executive Councillor Been Consulted?

n/a

c) Scrutiny Comments

The report will be considered by the Adults and Community Wellbeing Scrutiny Committee at its meeting on 30 May 2018 and the Health Scrutiny Committee for Lincolnshire on 13 June 2018.

d) Have Risks and Impact Analysis been carried out?

n/a

e) Risks and Impact Analysis

n/a

7. Appendices

These are listed below and attached at the back of the report	
Appendix A	Annual Report of the Director of Public Health on the Health of the People of Lincolnshire 2017

8. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Tony McGinty, who can be contacted on 01522 554229 or tony.mcginty@lincolnshire.gov.uk .

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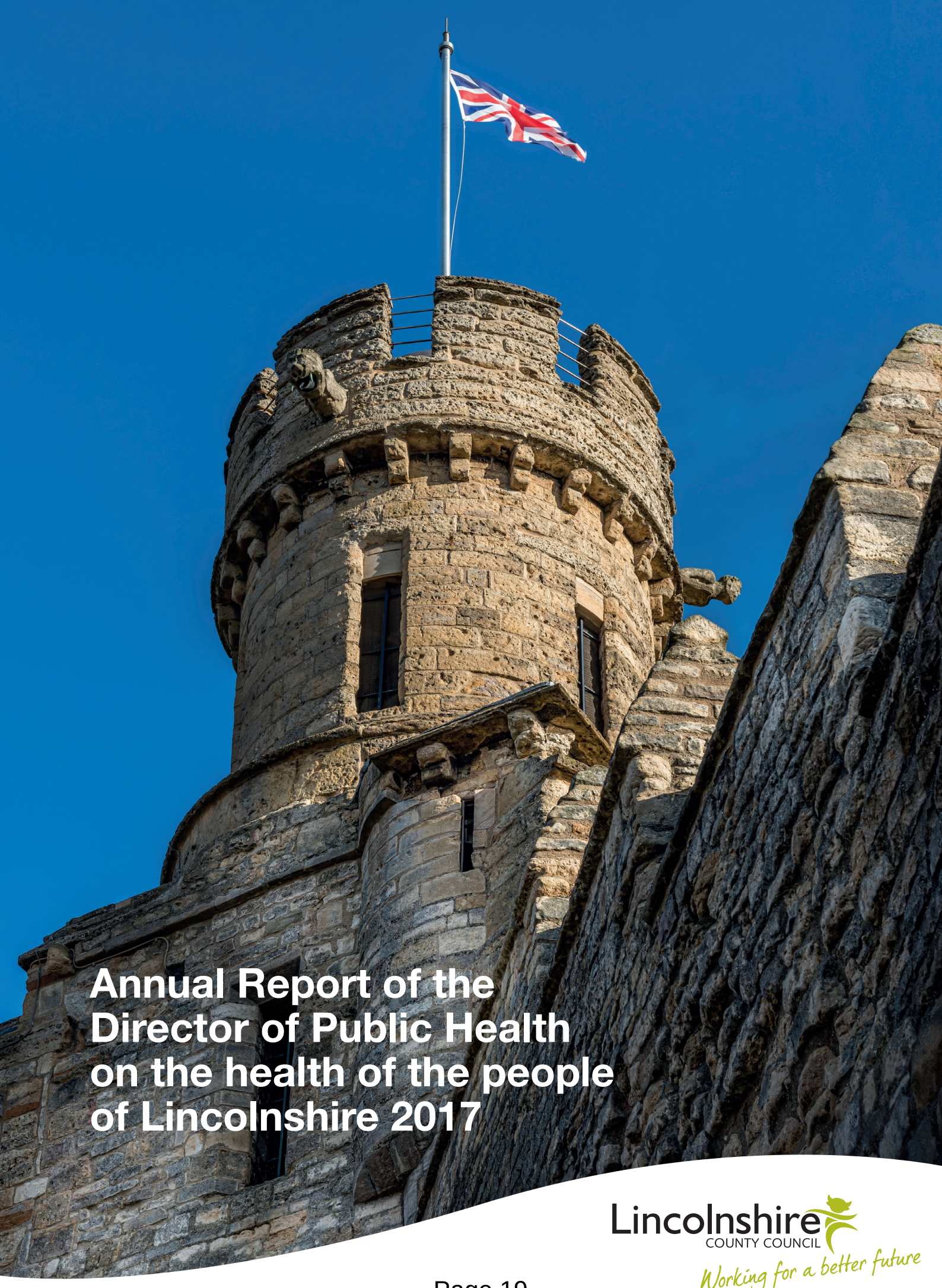


Annual Report of the Director of Public Health on the health of the people of Lincolnshire 2017

Lincolnshire COUNTY COUNCIL

Working for a better future

Forward

It is my duty, and pleasure, as Interim Director of Public Health (DPH) for Lincolnshire during 2017 and early 2018 to present an annual report on the state of the health of the people of Lincolnshire.

This report is as eclectic in its content as is the practice of public health as a local authority Public Health Team. I have chosen two main areas to reflect on this year, for entirely different reasons.

I reflect on the environmental hazards which present risk to the health of our population as it is some time since a Lincolnshire DPH reflected on this key area of responsibility and because the magnitude of some of the risks prevalent internationally at the moment are truly momentous. The pandemic potential of new strains of common organisms such as influenza, some measure of effect we have seen in the flu season just coming to a close is a clear and present risk to health. Alongside this, our reliance on, and relatively poor stewardship of, established antimicrobial medicines is presenting significant risk to individual patients through infection with resistant organisms.This risk has more than a theoretical potential to escalate into a global threat from the emergence of organisms for which our antimicrobial arsenal has no effective response.

The ageing nature of the population of the United Kingdom is well understood and the age profile of people in Lincolnshire is in many ways a somewhat more concentrated example of this overall national trend.

This demographic trend is often described in health and care terms as a significant threat or challenge to the sustainability of local systems of care. The models of strategic planning that bind to this view have been referred to in research literature as 'Apocalyptic Demography'. They tend to present ageing and worsened health and independence and subsequent increases in need or demand for care as an unavoidable scenario for which society and services can only prepare.

An exploration of the current associations between ageing, maintenance of independence and sustaining of good health quickly give hope of an alternative scenario in older age for much of the population. If there are significant differences in both lived experience and expectation in ageing between people living in the same communities already, this suggests it should be possible to level up expectations for everyone and create better separation between ageing and infirmity for more people.

The alternative health and care scenarios that could be realised by focusing on improving the forecast health and wellbeing of all local people to that somewhere near the expectations of our best communities are there to be achieved.

In an environment where the entire system of health and care is engaged in managing today's demands, it is an essential role of a local Director of Public Health to remind the system leaders of the opportunities offered in prevention. My purpose with this Annual Report is to do just that, to put the argument for prevention in the context of potentially apocalyptic local demography.

I trust you will be stimulated by the presentation of some the thinking nationally and internationally on this most complex of issues.

Tony McGinty
Interim Director of Public Health
for Lincolnshire

October 2016 to January 2018

List of Contributors

Ageing and Health

- **Andy Fox,**
  Specialist Registrar in Public Health
- **Michael Toze,**
  University of Lincoln

Health Protection

- **Saran Shantikumar,**
  Public Health Registrar,

  Public Health England East Midlands
- **Dr Jharna Kumbang,**
  Consultant in Communicable Disease Control,

  Public Health England East Midlands
- **Haymond Lam,**
  Environmental Public Health Scientist, Centre for Radiation, Chemical and Environmental Hazards,

  Public Health England
- **Graeme Hempsall,**
  Emergency Planning Officer,

  Lincolnshire County Council
- **Gail Beckett,**
  Senior Health Protection Nurse,

  Public Health England East Midlands
- **Stuart Aldridge,**
  Environmental Public Health Scientist, Centre for Radiation, Chemical and Environmental Hazards,

  Public Health England

Contents

The relationship between ageing and health

The health of the ageing population of Lincolnshire is not significantly different to that of the health of similar populations in the East Midlands and England as a whole. Evidence is clear that some progression towards poor health and greater limitations on physical fitness are to be expected as we age.

The prevalence of common conditions such as osteoarthritis and hypertension increase as we age, and we see significant increases in the rates at which people begin to suffer functional mental illness and cognitive impairments such as dementia. Declines in physical strength, fitness and balance may lead to increased risk of falling whilst osteoporosis may incline more people who do fall to suffer a joint or bone fracture.

Declining flexibility in our cardiovascular systems combined with more tendency towards hypertension result in an increasing incidence of stroke in older age.

Ageing generally decreases our resilience, recovery potential and recovery rates following an adverse health event or injury.

This picture of increased risk of a range of incidents and conditions as we advance into older age is problematic in itself, as people will cope differently with the onset of these conditions.

There is evidence, however, that a multiplier effect in likely loss of independence and a need for support to daily life activities occurs when an individual experiences more than one illness, or loss of faculty. Figure 1 provides a simple analysis of the relationship between the number of long term conditions experienced by individuals and the average health and social care cost of support.

In the UK currently, over 50% of people older than 65 have at least two chronic conditions (Barnett, Mercer, et al 2012) (Salive, 2013). This is known as multi-morbidity. Importantly, the health conditions that can contribute to multi-morbidity are varied, are not restricted to individual 'diseases', and include:

- *Symptom complexes such as chronic pain or frailty*
- *Sensory impairment such as hearing or sight loss*
- *Ongoing conditions such as a learning disability*
- *Physical conditions such as diabetes*
- *Defined mental health conditions such as schizophrenia*
- *Alcohol and substance misuse (National Institute for Health and Care Excellence, 2016)*

Figure 1 demonstrates that each condition present multiplies the cost of care for each individual. These costs are made up of a range of interventions across health and care. Having two or more such conditions increases the likelihood of hospital admissions, risk of mortality, likelihood of relying on multiple prescriptions, and risk of dependency (Kingston, Robinson, et al., 2018) (Marengoni, Angleman, et al., 2011).

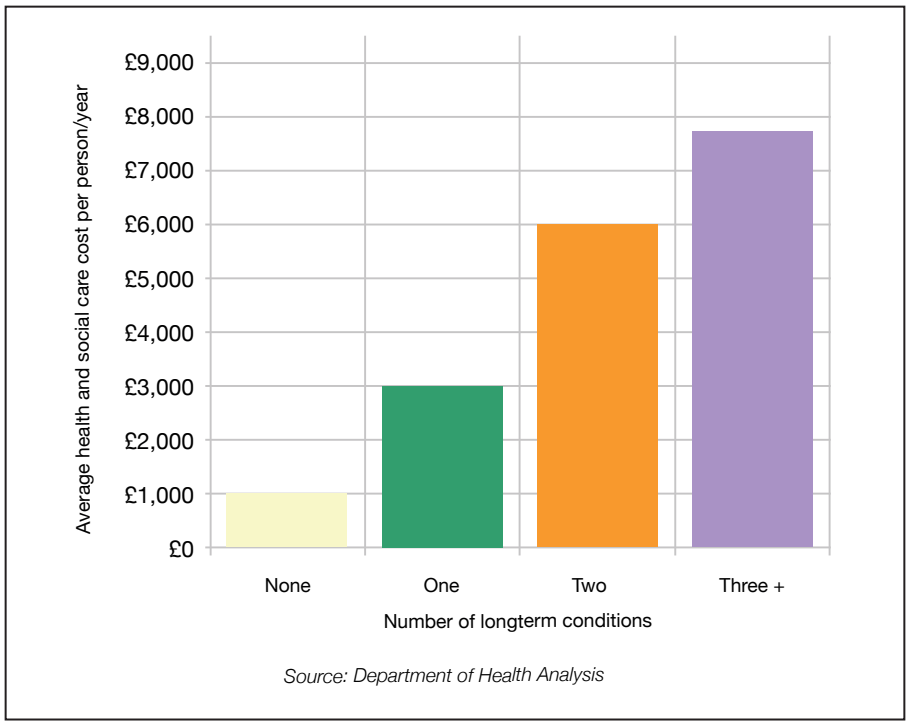
It is evident that the numbers of people who suffer from these conditions or who have health problems within a health and social care community, are higher where there are relatively more older people. The acceptance of a reasonable degree of correlation between the age of an individual and risk to their health is important. It is evident that older populations will have more health and support needs and will therefore consume health and care at a greater rate than younger populations.

This is important for the population of Lincolnshire as we have a higher proportion of people over the age of 65 than the average across England and this proportion is expected to increase more rapidly than in other parts of the Country.

In 2017, the population of Lincolnshire counted approximately 750,000 people. Of these, some 130,000 were over the age of 65, and this proportion is likely to grow. The expectation is thus for increased demand on the health and care in Lincolnshire in the future. It would be easy to translate this simply into planning to meet more and more complex health and care needs as a system response.

However, a 'demand planning' approach alone would have to presume that the increase in age profile is necessarily matched by growth in need for health and care interventions.

Figure 1: Summation of the Relationship Between Number of Long Term Conditions and Cost of Care



Source: Department of Health Analysis

Ageing, disease and disability are not inextricably linked

People do not wish to spend their older years with poor health or loss of independence, and given a choice between being treated for a condition and never having had that condition, most people could be expected to choose the latter. Having excellent health and care services to prevent deterioration, treat and care for older people in poor health is vital to support them to maximise the value of their remaining years of life. The biggest overall gain is achieved when a pathway of prevention is available that seeks to prevent disease entirely, slow or prevent its progression and support people to live well with illness and disability.

Setting aside discussion of the health of future older people, it is clear that experiencing poor health in old age is not inevitable from the experiences of the older people already living in Lincolnshire. Whilst it is true that the majority of people over the age of 65 in the County are living with a chronic condition, it is also true that a significant percentage are living without such conditions and the limitations they may impose.

In Lincolnshire, there are clear differences in the degree to which different groups develop illness as they age. As we will see, if some groups are more likely to get ill than others in old age, we should not consider illness inevitable for all. These differences in the experiences of groups within our existing older populations should instead lead us to consider the characteristics of the people avoiding poor health and asking how these characteristics may be made available to other older people.

The factors, decisions and underlying conditions in communities which may prevent illness in old age for those who are approaching this time of life, or even those who are younger now, are evidently complex. However, there is plentiful evidence of effectiveness for interventions that will support better health as people go through life, with benefit to their health as they age.

This means potentially thousands of people in Lincolnshire who may be on pathways towards developing chronic conditions in later life could be helped to change their trajectory.

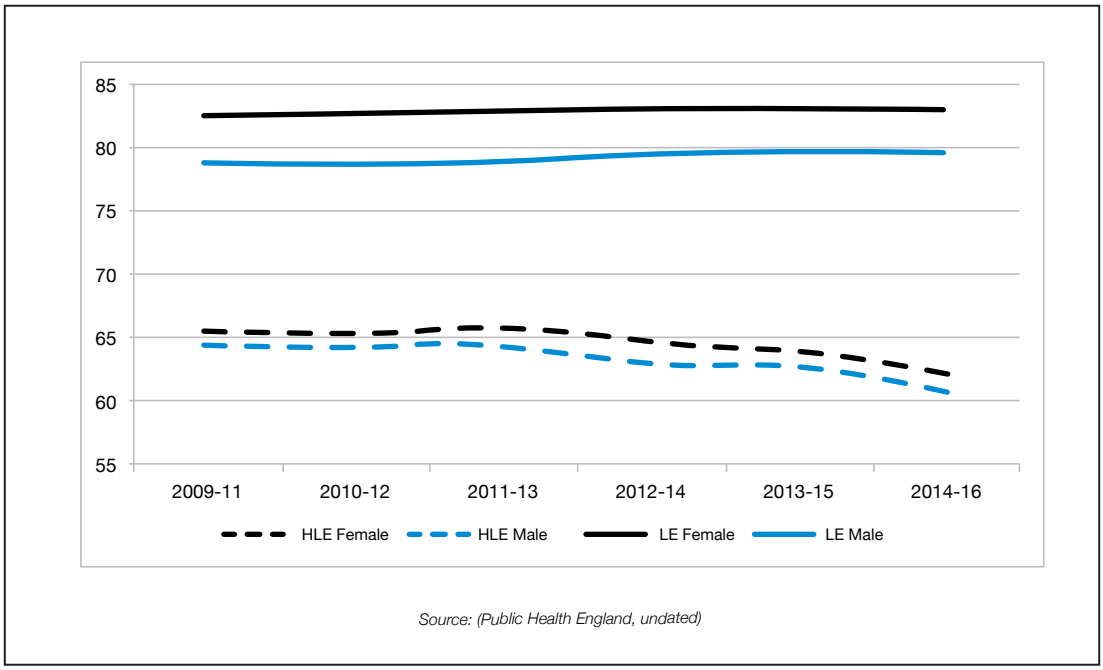
Longer life, better health, or both?

Although the last 40 years has seen continuous growth in life expectancy in Lincolnshire, not all of these extra years are always spent in good health. Figure 2 shows us the trend over the last 5 years of available data for healthy life expectancy and life expectancy in Lincolnshire. We can see that in this time period, life expectancy has continued to slowly increase whilst healthy life expectancy has actually decreased slightly.

In Lincolnshire in recent years then, the gap between healthy life expectancy and life expectancy has widened i.e. on average, people are spending more years in ill health as their life expectancy increases.

Whilst data for Lincolnshire is relatively small in number to draw major policy conclusions from, the trend described is matched when the much larger data sets at East Midlands and England level are subject to the same analysis. There is even some evidence starting to emerge that this loss of healthy life expectancy is soon to be followed by the first reduction in overall life expectancy.

Figure 2: Health Life Expectancy (HLE) and Life Expectancy (LE) in Lincolnshire, 2009-11 to 2014-16



Source: (Public Health England, undated)

What does 'poor health' or 'multi-morbidity' look like?

It would help at this point to understand exactly which conditions contribute to poor health in old age, or 'multi-morbidity' as it is also known. Table 1 lists many of the conditions which affect people in old age, along with the percentage of people over the age of 65 in the UK who we would expect to be living with this condition.

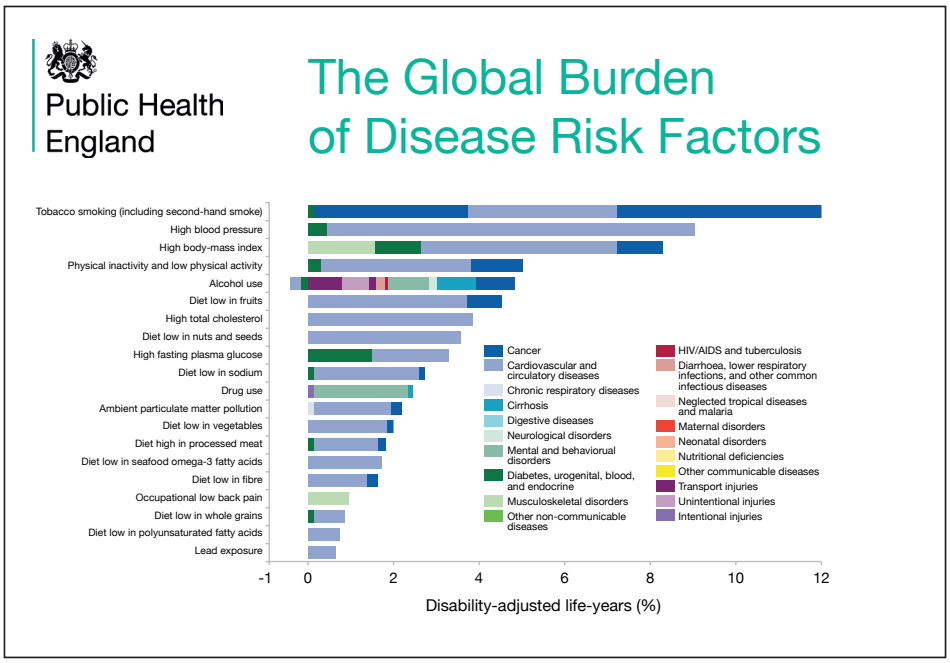
Although these conditions are prevalent in the current population of over 65s in both the UK and Lincolnshire, they are unevenly distributed, with some populations aged over 65 years experiencing far higher rates of these conditions than others. It is well documented in the evidence base, that it is not inevitable that people will develop these conditions as their risks increase due to ageing. Across these conditions, and their increasing risk over time, the highest impact causes, and cause of the causes, could be described as in Figure 3.

Table 1: Prevalence of key conditions in UK over 65 population

Condition	%
Hypertension	49.0%
Arthritis	48.6%
Coronary Heart Disease	18.3%
Respiratory	18.0%
Diabetes	14.7%
Cancer	12.6%
Hearing Impairment	12.4%
Stroke	7.5%
Dementia	6.8%
Visual Impairment	6.2%
Cognitive Impairment (Not Dementia)	2.7%
Depression	2.3%

(Source: Kingston, Robinson, et al., 2018)

Figure 3: The Global Burden of Disease Risk Factors



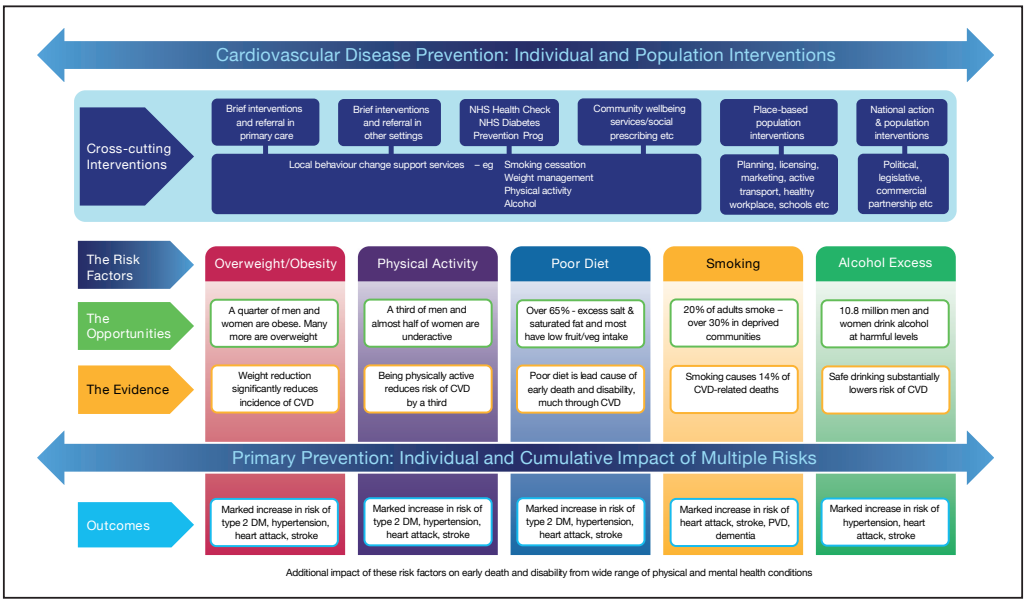
Source: Public Health England, 2015 a

There is also plentiful evidence that even once these conditions are present, the impact and outcomes for people can be managed through effective self and professional management of the conditions. The most effective interventions at this stage of chronic condition often include addressing the factors in Figure 3.

This gereralised model can be supplemented for specific disease types, like cardiovascular disease, as summarised in Figure 4.

The magnitude of the overall effect on people's health experiences of the effective implementation of these interventions as they age is described later in the report.

Figure 4: Cardiovascular disease prevention – individual and population interventions



Source: Public Health England: 2016 b

Protective factors, risk factors and triggers

To give best effect to preventative approaches to ageing, it is important to ensure that evidence based general preventative interventions at population scale (Figure 2) and the best possible disease specific interventions (Figure 3) are in place.

The evidence base on healthy ageing is clear, however, achieving these goals alone for a population like Lincolnshire's will not maximise the outcomes for ageing adults at risk of poorer health experiences.

There is significant evidence that some declines into poor health; loss of independence or control of existing conditions can be exacerbated or triggered by an event such as having to change accommodation; a bereavement or an injury from something like a fall.

Discussions of later life housing can have a tendency to focus on specialist accommodation such as care homes, sheltered and extra care housing. However, 93% of people aged over 65 years live in mainstream housing and many would seek to remain there for as long as is practical (Keenan, 2010; Pannell et al., 2012). The translation of this desire for older people (and perhaps for housing, health and care strategists) requires a broader conceptual view which might be described as 'ageing in place' (Wiles et al., 2012; Van Disk et al., 2014) and needs to include factors such as: perception of the area; quality of local amenities and transport links. It is clear, however, that an effective approach to housing for older people is an important factor in protecting people from decline into illness and disability as they age.

In Lincolnshire, only 48% of adult social care users say that they get as much social contact as they would like (Public Health England), and being lonely and cut off from family and friends is known to increase the risk of frailty by 85% (Gale, Westbury, et al., 2017).
It is important in this context to accept the subjective experiences of people being alone and experiencing loneliness. Victor, Scrambling, et al. (2005) found that in a nationally representative sample of people aged over 65, whilst 61% described themselves as never lonely and 2% as always lonely, there was no correlation between these feelings and contact with family or friends. The issue is rather more to do with psychological and social functioning in the place where people live. The evidence base suggests a need to incorporate explicit assessments with individuals to properly understand this risk factor for poor health and demand on services is the only way to ensure the complex subjective experiences of people are catered for (Victor and Bowling, 2012).

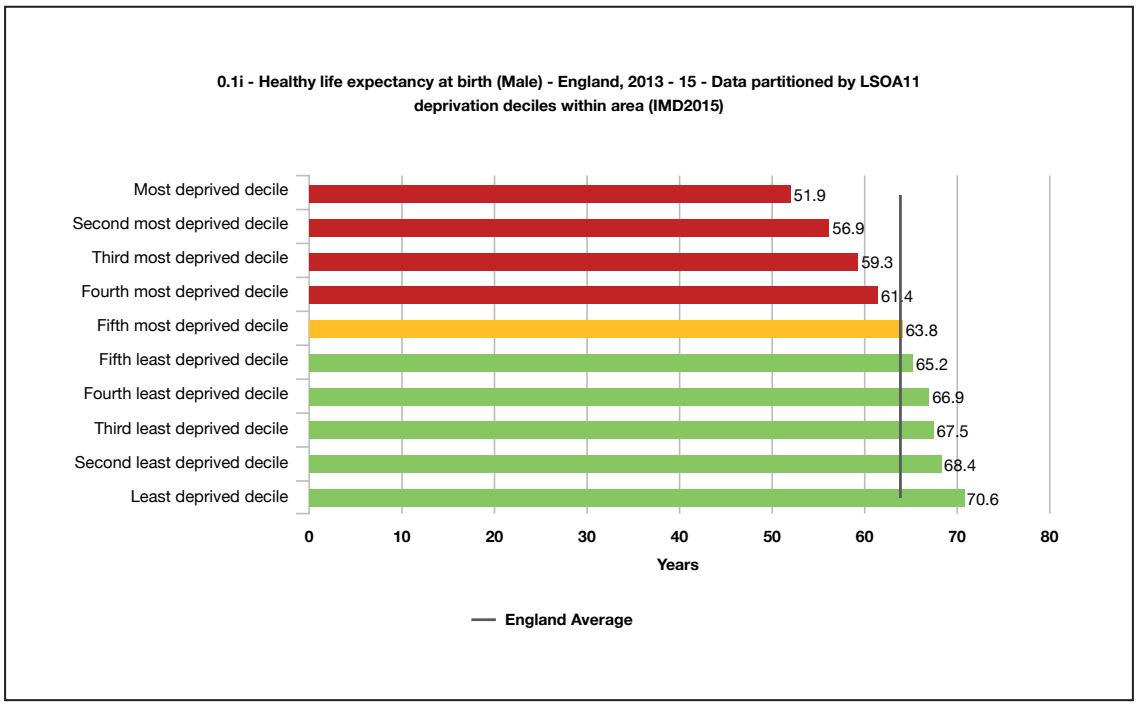
Having a fall can be a minor inconvenience but for some it can have serious consequences. In Lincolnshire during 2015/16, there were over 2,800 hospital admissions for people aged over 65 due to a fall. Falls can cause injury but they are also linked to social isolation. (Public Health England, Undated)

Why is poor health not inevitable?

There are groups of people in Lincolnshire who have far better health than others. The evidence shows that people from the higher socio-economic groups, i.e. those people who are relatively better off than others, have much better health in old age than their peers with less resources.

To observe this from known intelligence sources, Figure 5 shows that in England, the tenth of the population with the highest socio-economic status can expect to live almost twenty years longer in good health that the tenth of the population who are the most deprived. This demonstrates that an unhealthy old age, with multi-morbidity, is not inevitable but can be linked to influencable factors such as our resources, our lifestyle, our opportunities, and our environment.

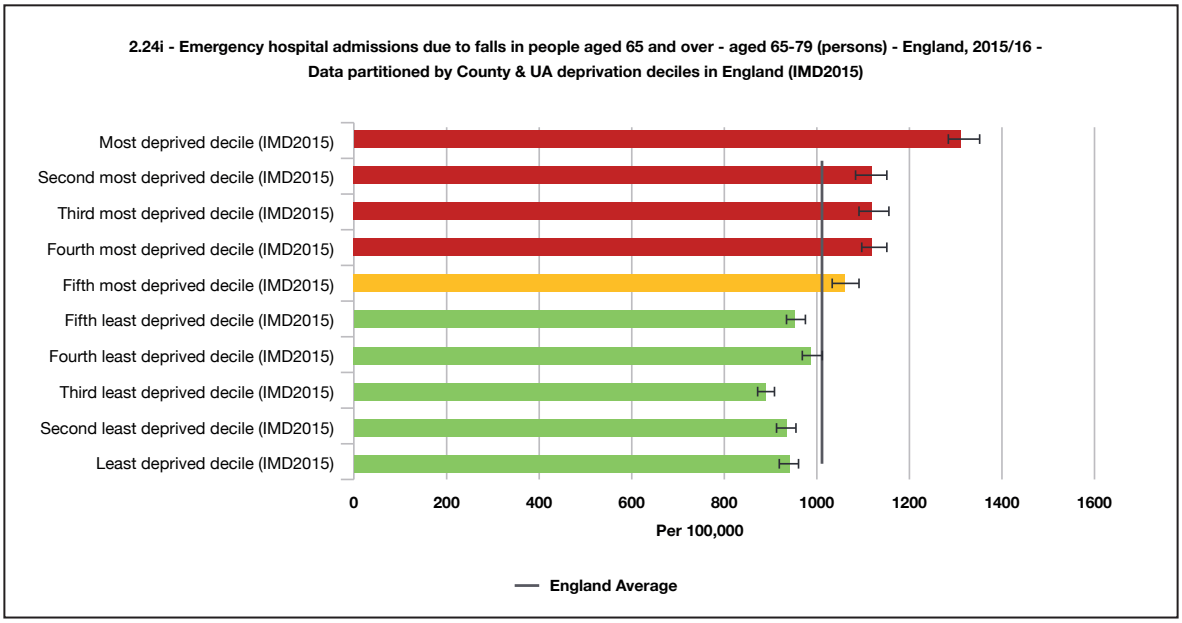
Figure 5: Healthy life expectancy at birth (for men) by deprivation decile



Source: (Public Health England, undated)

As an example of this for one of the trigger factors described above, Figure 6 shows the rate of hospital admissions due to falls in England by 'deprivation decile'. This shows that the tenth of the population of Lincolnshire who have the highest socio-economic status are approximately a third less likely to have a fall that results in a hospital admission than the most deprived tenth of the population. Importantly, this difference is statistically significant, which means that it is very unlikely to have happened by chance.

Figure 6: Hospital admissions due to falls by deprivation decile



Source: (Public Health England, undated)

The potential of prevention

If poor health in older age is not inevitable, but is influenced by many things, including lifestyle and environment, it follows that if we make changes to these things, we could prevent some of this expected disease.

Much academic work has been completed to study just how amenable to preventative interventions some of these conditions are, and we can summarise samples of the available evidence here.

Physical activity for better older health

Behavioural and lifestyle interventions, such as meeting the recommended level of physical activity for adults, can have a major preventative effect on a number of conditions that contribute towards frailty and ill-health in older age. Consequently they have potential to reduce the degree of ill-health faced by the population of Lincolnshire, as well as easing the pressure on the health and social care system and the local economy. Table 2 below lists potential reduction in lifetime risk if individuals maintain the recommended level of physical activity.

Table 2: UK lifetime risk for key conditions and the effect of maintaining physical activity

Condition	UK lifetime Risk	Reduction due to physical activity	Lifetime risk for physically active
Hypertension	70%	50%	35.0%
Osteoporosis	50%	40%	30.0%
Stroke Incidence	17%	30%	11.9%
Arthritis	14%	50%	7.0%
Dementia	13%	30%	9.1%
T2 Diabetes	10%	50%	5.0%

(Source, Public Health England, undated) (ONS, 2017)

If we apply these lifetime risk figures to the current population of Lincolnshire, we get a glimpse of the huge potential in preventative interventions. Lincolnshire's population is estimated to be approximately 750,000 people – 70% of whom would normally be expected to develop hypertension (high blood pressure) at some point in their life. If everyone remained physically active, we could expect this percentage to be halved.

To put that into context, we would expect hundreds of thousands of people to be spared having to deal with high blood pressure, and a corresponding reduction in ill-health in old age. Importantly, this is just from the benefits of staying physically active and other important preventative interventions like maintaining a healthy diet, and staying socially connected rather than isolated may add to the effect.

Strength and balance for older age

It is known that strength and balance training (a physical activity intervention for older people) can reduce the risk of falling by up to 29% (Public Health England, 2017a). Consequently, we could expect to prevent one fall for every 4 people who engaged in such training. There is a considerable economic benefit to be had for the health system from preventing falls, as each fall that results in a hospital admission has been estimated to cost the NHS £5,000 (The Chartered Society of Physiotherapy, undated). There may well be further cost savings to the health and social care system if injury is prevented, as well as wider costs to the economy. The total cost of fragility fractures to the UK economy has been estimated at £4.4bn, which includes £1.1bn of social care costs. Hip fractures are estimated to make up nearly half of this total cost (Public Health England, 2017a).

Stroke

Stroke is the fourth single cause of mortality in the UK and can lead to many complications. The risk of having a stroke doubles every decade after the age of 55. There are a wide range of risk factors for stroke, which includes lifestyle (e.g. smoking and alcohol use) and having conditions such as hypertension and atrial fibrillation (AF) (National Institute for Care and Excellence, 2017). Some of the high impact interventions in Table 3 will contribute to stroke prevention.

The risk of stroke increases five-fold for people with AF(Stroke Association, 2018a) (an ineffective heart beat in part of the heart muscle). The prevalence of AF increases with age (the prevalence in those over 65 years being 7.2 per cent, compared with 10% in over 75 years). In people who have had a stroke, concurrent AF is associated with a higher rate of mortality and greater disability. Approximately 60 per cent of people admitted to a hospital with a stroke caused by AF are not taking the recommended anti-coagulants. It is estimated that two thirds of AF related strokes can be avoided (Stroke Association, 2018b).

The East Midlands Clinical Network Networks (2018), has identified the number of patients in each Lincolnshire CCG who could have undiagnosed AF and those high risk AF patients who are not on anticoagulation (Table 3).

Table 3: CVD Prevention – Atrial fibrillation

	Stroke Admissions with Known AF (2014-15)	Number of Undiagnosed AF Patients (observed to expected)
Lincolnshire West CCG	87 (31.6%)	2006 (67%)
Lincolnshire East CCG	80 (20%)	2330 (71%)
South Lincolnshire CCG	62 (27.8%)	1449 (70%)
South West Lincolnshire CCG	20 (20.8%)	1092 (72%)

(Source: East Midlands Clinical Senate Networks, 2018)

Healthcare professionals are continuing to ensure that people identified with AF are appropriately managed to reduce their risk of having a stroke. In 2016/17, the AF prevalence for all ages was 2.45%, representing nearly 19,000 people. The NHS Right Care Programme (NHS England, 2018) Stroke Pathway identifies where Lincolnshire Clinnical Commissioning Groups (CCGs) are in relation to their 'similar' CCGs on a number of indicators, including stroke prevalence and anticoagulation therapy. This includes a number of opportunities, for example increasing the AF found closer to the prevalence expected in our population

Do the same or Do prevention? A comparison to 2035

In order to quantify better just how much potential there is in prevention, we can compare two possible options: the "do the same" option, and the "do prevention" option, and we can factor in the expected growth in Lincolnshire's population, as well as the projected change in the prevalence of these conditions over time.

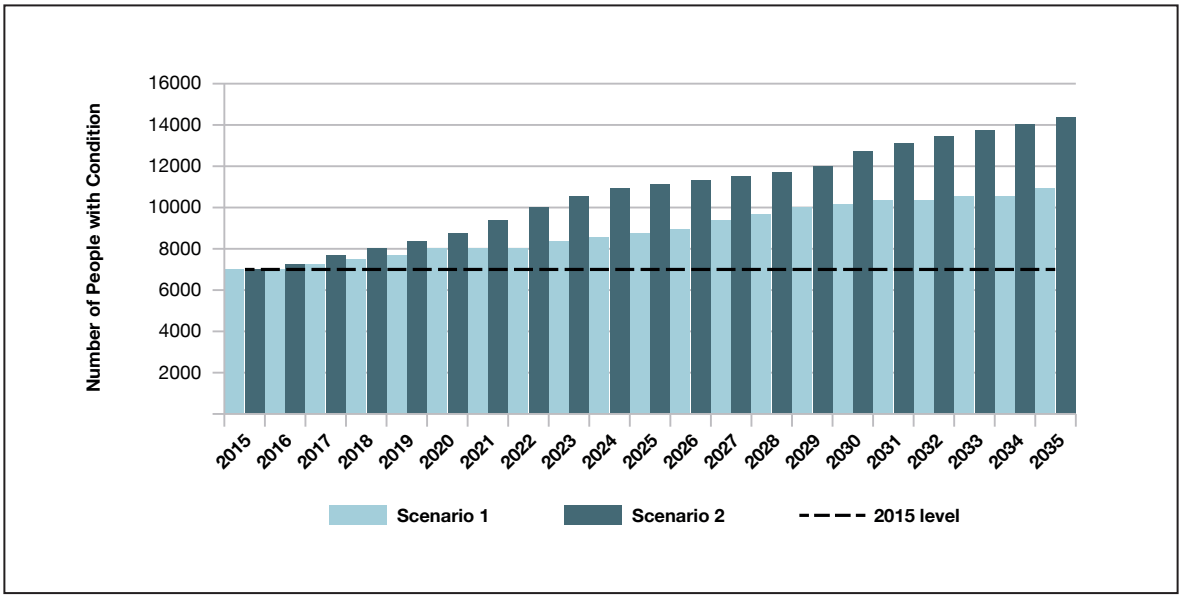
By 2035, Lincolnshire's population is expected to grow to over 820,000 people, and the population aged over 65 to over 243,000 (Office of National Statistics, 2017). We can also consider likely changes in disease prevalence, and use these to map the expected changes in the numbers in Lincolnshire with conditions that contribute to poor health in older age, all the way through to 2035 (Kingston, Robinson, et al., 2018).

What happens if we do the same?

If we do no more than we are doing now, the numbers of people living in Lincolnshire who have poor health in old age will increase in line with people's current experiences. If the proportion of people who have health conditions or impairments remains the same, the number of people living with these conditions will rise broadly in line with population growth. If the prevalence of these conditions increases as well (as is expected for some conditions), the number of people in Lincolnshire with these conditions may rise even further than suggested by ageing alone.

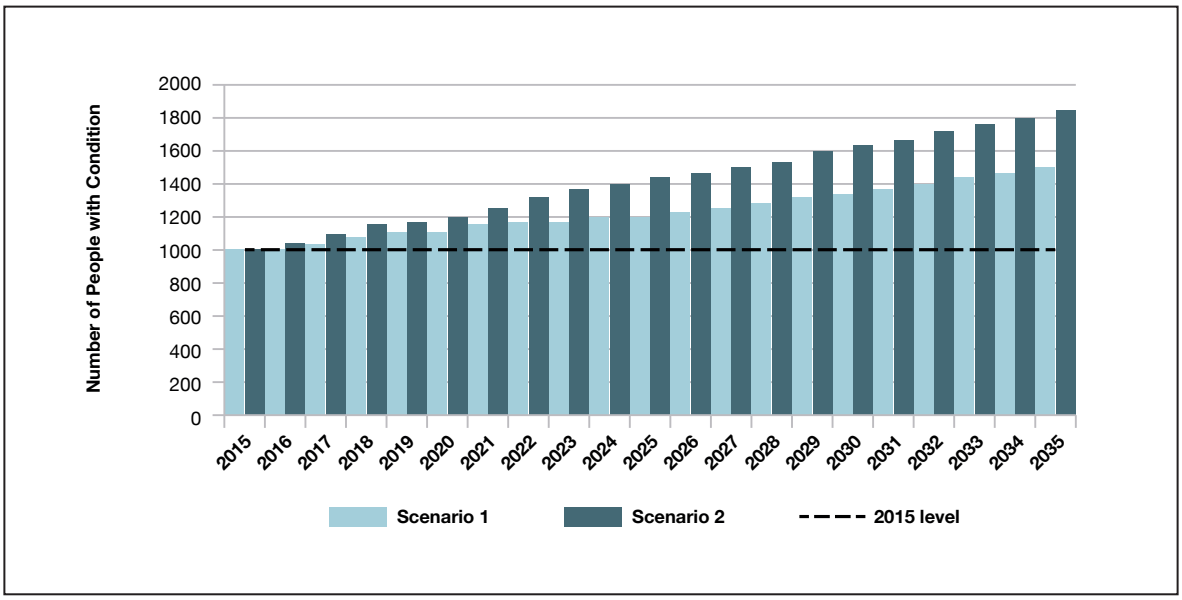
Labelling the population growth only scenario 'scenario 1' and the population growth and prevalence change scenario ' scenario 2', in Figures 7, 8, and 9 show projections for some key conditions.

Figure 7: Projected growth in numbers of people in Lincolnshire with Arthritis, 2015 to 2035



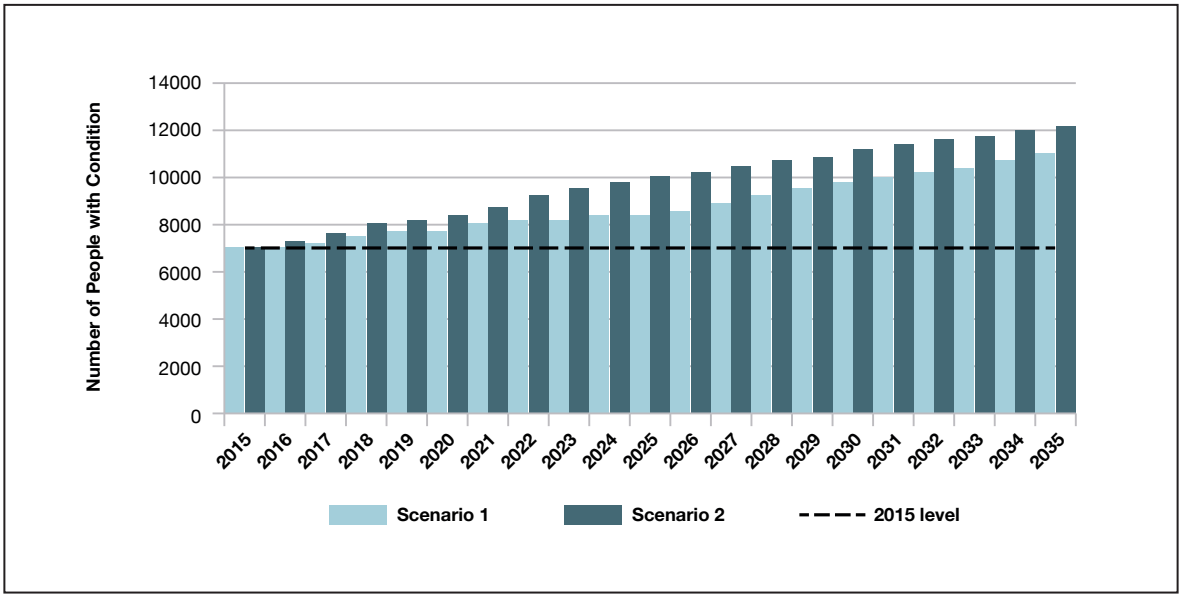
(Source, Public Health England, undated) (ONS, 2017)

Figure 8: Projected growth in numbers of people in Lincolnshire with Dementia, 2015 to 2035



(Source, Public Health England, undated) (ONS, 2017)

Figure 9: Projected growth in numbers of people in Lincolnshire with Hypertension, 2015 to 2035



(Source, Public Health England, undated) (ONS, 2017)

What we can clearly see from these projections is that if we do nothing, the number of people with poor health in older age in Lincolnshire will increase significantly. For example, the number of people with dementia could be expected to increase by 80% or more by 2035.

Additionally, the number of people who have a fall resulting in a hospital admission in Lincolnshire would be expected to roughly double, to over 4000, by 2035. The cost to the NHS in Lincolnshire of these extra falls alone would equate to over £10m. The cost to the individuals, in terms of ill health and potential consequences such as loss of independence, would be far more significant.

What happens if we "do prevention"? Physical activity

Currently, the proportion of adults meeting recommended levels of physical activity in Lincolnshire is estimated at 65% (Public Health England, undated), although the prevalence of older people (over 75) who are active is thought to drop to 30% (British Heart Foundation, 2015). As Table 2 demonstrates, meeting the recommend levels of physical activity equates to a significant reduction in lifetime risk for many conditions which affect older people. Table 4 details how a relatively modest increase in the proportion (just 20%) of 65s being physically active could affect the prevalence of key conditions in Lincolnshire.

Table 4: Modelled reductions in key conditions following increase of 20% of over 65s becoming physically active.

Condition	Over 65s expected to have condition in 2017	"Do Nothing" - Over 65s expected to have condition in 2035	"Do Prevention" –potential people with prevented disease if further 20% are active
Arthritis	88,658	159,961	3,414
Hypertension	87,335	136,308	17,069
T2 Diabetes	27,360	52,670	2,438
Stroke	13,471	22,677	5,803
Dementia	12,183	20,727	4,438

(Source, Public Health England, undated) (ONS, 2017)

The reductions in prevalence of key older age conditions available if an additional 20% of over 65s became physically active are significant, with an estimated reduction of 17,000 cases possible in hypertension alone. Further increases in the proportion of older people who were active would further reduce the risk and increase the numbers of people who benefit from this change of lifestyle.

Strength and balance for older age

As a further example, it has been shown that home-based strength and balance training can reduce the rate of falling in people participating by 29% (Public Health England, 2017a). If we apply these figures to the expected level of falls in 2035, we can see just how many it is possible to prevent. Table 5 below gives these results, for this intervention as well as group-based training, and home assessment and modifications, and compares this to the 'do nothing' option.

Table 5: Falls interventions & projected reduction in emergency admissions due to falls in 2035

Falls Prevention Intervention	Emergency hospital admissions due to falls expected in 2017	Emergency hospital admissions due to falls expected in 2035	Emergency hospital admissions prevented
Do Nothing	2,860	4,007	0
Strength & Balance Training - Group Therapy	2,068	2,845	1,162
Strength & Balance Training - Home Therapy	1,981	2,725	1,282
Home Assessment & Modification	2,359	3,246	761

(Source, Public Health England, undated) (ONS, 2017)

This case for this type of falls prevention intervention is clear, demonstrating that over 1,200 emergency admissions could be prevented in Lincolnshire in 2035, taking into account expected prevalence changes and population growth. The potential 29% reduction in the number of falls isavailable every year, and the cumulative number of prevented falls could be as high as 25,000 over the 19 years modelled above. The economic case for action is clear as the potential cost to the NHS of implementing just one intervention proven to prevent falls (emergency hospital admissions) could be reduced by over £125m between 2017 and 2035.

Conclusions and Recommendations

The age profile and predictions of changes in the overall proportions of our population in different age groups in Lincolnshire make it a place which might be described as having an 'Apocalyptic Demography'.

'Apocalyptic Demography' is a term used by social ageing experts to describe how statistics can be used to suggest that ageing is a significant threat to public services and the economy (Robertson,1997; Gee, 2000). The primary nature of the risk described in the models that describe this is that, in a given population, the balance between the people who need support and the people able to provide it reaches a critical point.

In the case of our ageing population, this might be expressed as the ratio between older people in need of support and younger people in a position to provide support. This support might be physical in terms of family and carer support or economic activity like paying care fees or taxes to enable others to provide or fund support to older people.

A commonly used ratio of this type is the Old Age Dependency Ratio (OADR) and it is generated by simply dividing the number of people aged over 65 by the number of people aged 19-64 years. This ratio is, perhaps a deliberately simplified example of the problem with analyses which assert a generalised relationship between an easily measurable characteristic of a population (like their age at last birthday) and the whole of the population with that characteristic.

The OADR assumes, for example, that all people aged over 65 need support and all people aged 19-64 years are able to give support in the ways described above.

This clearly is not the case and different individuals and communities will be engaged in very different activities and have a range of different capabilities at the same age. It is clear, for example, that the rate at which different socio-economic groups of older people in a population who will be working will vary, with varying impacts on their health.

The apocalyptic demographic view of the UK and Lincolnshire populations that is prevalent in most planning models for health and care are often described as a given unless something is done to offset the tipping point in the ratio between those requiring care and support and those supplying it.

As differences in the disability and disease rates between different parts of the population, with different protective and preventative factors in play are evident, then it is clear that the likelihood of poor health in ageing is not immutable.

Finding the space and resources to invest in prevention activities at sufficient scale to make the return evident in the sustainability of a complex health and care system is challenging.

However, the evidence for doing so for now and the future for the benefit of our current and future older population is overwhelming. I therefore recommend that:

1. *The Sustainability and Transformation Partnership should review its approach to planning and investing in those areas of preventative service where evidence of effect is irrefutable.*

2. *That the Clinical Commissioning Groups (CCGs) should review the achievement and variation in clinical outcomes for people of all ages who have chronic diseases and commission activity to address inequities in said outcomes.*

3. *That the County and District Councils should review their strategies for addressing approaches to the key protective and trigger factors the evidence base suggests support healthier ageing.*

1. Health Protection and Communicable Disease

What is Health Protection?

The protection of the health of the population from known hazards, and the monitoring of health to identify emerging hazards, are cornerstones of public health. Health protection aims to prevent or minimise the harm caused by infectious (or "communicable") diseases, as well as diminish the health impacts of non-infectious hazards, such as extreme weather and chemical exposures.

Communicable disease and environmental hazards can affect anyone and everyone, be that influenza or flooding. Reacting promptly and systematically to emerging incidents, and proactively monitoring and planning for future threats to public health, are crucial in protecting the people of Lincolnshire and beyond. Being vigilant and actively addressing issues in health protection is also of vital importance in reducing health inequalities. For example, we know that many communicable diseases are associated with socioeconomic disadvantage (Semenza, Suk, et.al. 2010). Some communities are also more vulnerable to health protection hazards, including children and the homeless (World Health Organisation, 2010) (Sommer, Grieber, et. al, 2010).

Specialist health protection functions are provided by Public Health England (PHE), which has a Health Protection Team dedicated to Lincolnshire who manage a wide range of incidents, disease outbreaks and wider health protection issues. Additional support for health protection is provided by the four Lincolnshire Clinical Commissioning Groups (CCGs) (in particular, their federated Health Protection Team) and the Director of Public Health, who supports and provides local leadership for the local authority responses to incidents. The Centre for Radiation, Chemicals and Environmental Hazards (CRCE), also part of PHE, provide expert input in the management of chemical and environmental incidents. There are many national organisations that contribute to local-level health protection. For example, the Animal and Plant Health Agency (APHA) identify and control disease in animals and plants. The strong working relationships between local partners contributes to the success we continue to achieve in protecting health in Lincolnshire.

In this chapter, the main contemporary and emerging hazards faced by local people are described, along with the roles and activities of the Lincolnshire Health Protection Teams, and their partners, using recent examples to highlight how the population's health is protected in practice.

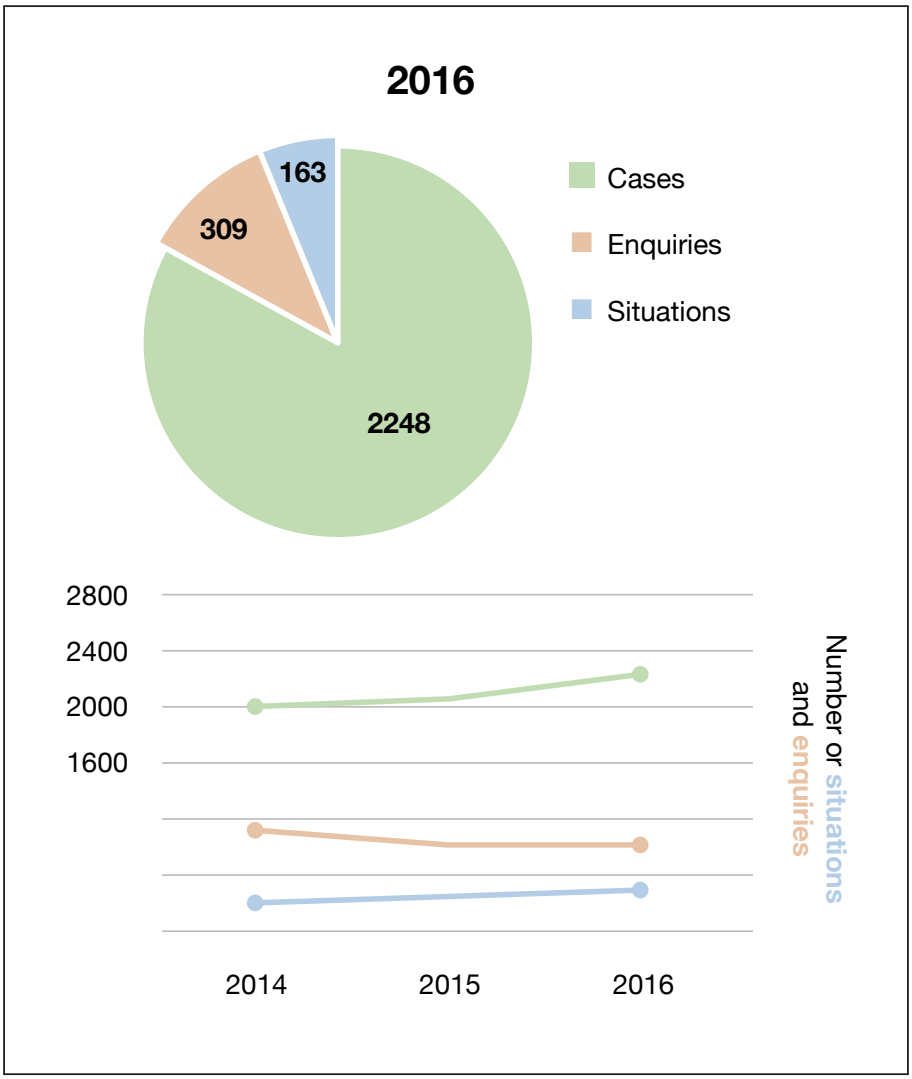
Communicable Disease

Much of the work done by the PHE Health Protection Team is based on individual cases, wider situations and incidents, or enquiries related predominantly to communicable disease. "Cases" are individuals with, or potentially with, a condition of relevance to health protection. Many of these cases are referred to the Health Protection Team by healthcare professionals who have a statutory duty to notify them of people suspected to have one of a list of 32 conditions, such as food poisoning, tuberculosis (TB), measles and meningitis (Public Health England, 2010). Situations are circumstances which either result in linked cases (such as an outbreak of food poisoning in a care home), or which may result in cases and thus require monitoring (such as infectious contamination of a water supply line). Enquiries are received from a wide variety of sources, including hospitals, GP practices and the general public.

In 2016, the Health Protection Team managed 2248 individual cases of communicable disease in the county, for example advising people how to limit spreading an infectious disease, or providing vaccinations for those in contact with an infection to reduce the risk of transmission. They also responded to 309 enquiries, and dealt with 163 situations. These annual figures are fairly typical, with the numbers of cases, situations and enquiries remaining largely stable over the last few years (Figure 1).

1. Health Protection and Communicable Disease

Figure 1: Summary of workload directed towards the PHE Health Protection Team from Lincolnshire in 2016, and trends over 2014-16.



. *(Source: Data from HPZone)*

Summary of key communicable disease hazards

Food poisoning, which incorporates a variety of causes, encompasses over a third of cases dealt with. Other common cases include scarlet fever and hepatitis, as well as the vaccine-preventable conditions mumps and whooping cough. There were 13 declared incidents in relation to TB infection in Lincolnshire in 2016 – a disproportionately high number compared to areas of the country such as Leicester which have a much higher number of individual cases of TB. As well as outbreaks of other infections, additional situations managed included potential exposure to chemicals, assessment of public health implications in relation to a decomposing whale carcass on the Lincolnshire coast, and localised water supply contamination. Here, some of the most common and important health protection hazards in relation to communicable disease are discussed. Other communicable disease hazards are described later on in this report.

Viral Gastroenteritis and Food Poisoning

Of the 163 situations dealt with in 2016, 100 were outbreaks of gastroenteritis, and the number of such outbreaks has increased over the last three years. The majority of gastroenteritis outbreaks were due to suspected norovirus. Norovirus – also known as the winter vomiting bug – is a highly contagious viral disease that causes diarrhoea, vomiting and abdominal pain. It can be transmitted from person to person by ingesting contaminated food or water, as well as through the air or by touching contaminated surfaces. Symptoms can begin as little as 12 hours after exposure, and can last a few days. The elderly and the very young are at particular risk of dehydration. Because it is so contagious, cases in close settings frequently result in outbreaks, such as in care homes, childcare settings, restaurants and hospitals. Prevention of norovirus involves decontamination of surfaces and careful handwashing with soap and water, as alcohol-based disinfection gels are far less effective at eliminating the virus.

Food poisoning describes any illness that results from the ingestion of contaminated food, and it affects around a quarter of the UK population every year. Whilst food poisoning frequently results in diarrhoea and vomiting, there are many possible bugs that can cause it, including salmonella, campylobacter and E.coli O157, as well as norovirus. Although food poisoning is usually self-limiting, the resulting absences from school and work have been estimated to cost the UK economy over £1.5 billion annually (Food Standards Agency, 2011). All cases of suspected food poisoning should be notified to PHE, and in Lincolnshire in 2016 there were over 600 cases of Campylobacter, almost 100 of Salmonella and 10 of E.coli O157 infection. The numbers of Campylobacter infections have been steadily reducing over the last three years, whilst the annual numbers of cases of the other infections have remained stable. By working in close partnership with Environmental Health Officers (EHOs) in local councils, the potential sources of food poisoning can be identified and eliminated. EHOs also play a crucial role in assessing, monitoring and implementing safety practices in premises that sell and serve food, helping minimise the risk of food poisoning to the local population.

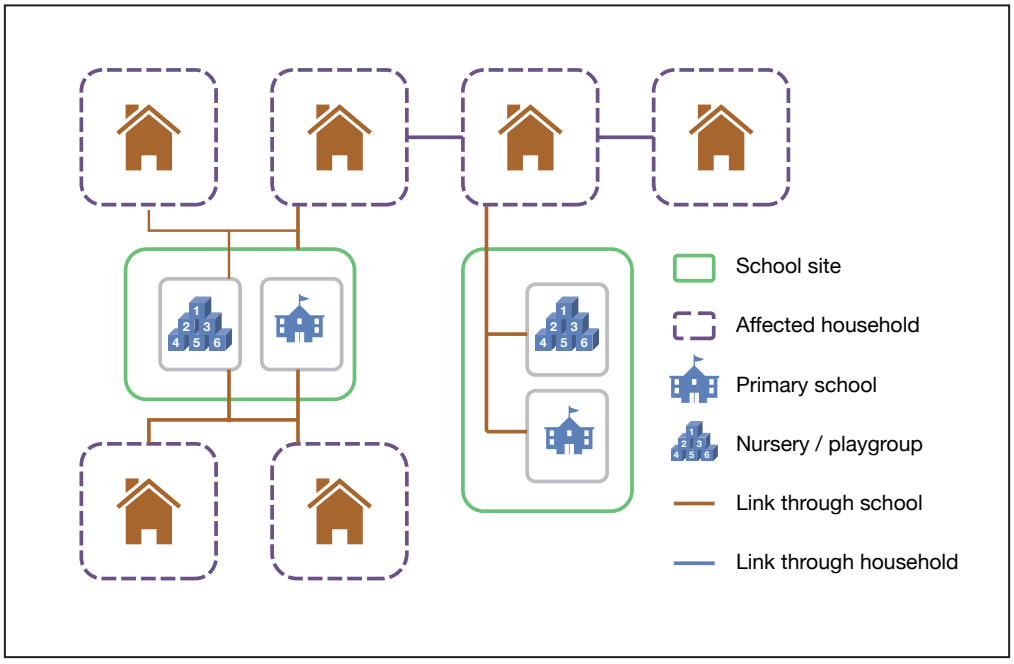
Hepatitis A

Hepatitis A – a virus that causes inflammation of the liver – is a relatively uncommon infection in the UK that is also spread by ingesting contaminated food or drinking water. Symptoms include abdominal pain, fever and jaundice, and these can be severe, lasting weeks or months. However, because hepatitis A is infectious for around two weeks before symptoms begin, and younger children frequently do not have any symptoms, there is a risk of inadvertent transmission within households and the community. Hepatitis A has increasingly been the focus of disease outbreaks internationally, with three multi-country outbreaks being reported across Europe in 2016/17, affecting over 1000 people across 19 European countries.

Case Study – Hepatitis A Outbreak

In 2016, the Health Protection Team dealt with a cluster of cases of hepatitis A infection affecting people in 6 households in a single postcode area of Lincolnshire. By actively testing household members of the cases for infection, it was determined that some children did have hepatitis A infection without symptoms. In addition, by identifying factors in common between the households, it was found that some of the families affected were known to each other. Furthermore, there were two primary school sites in common between the affected children (Figure 2).

Figure 2: The links between affected households in the 2016 Lincolnshire Hepatitis A outbreak



Based on this intelligence, several additional measures were taken in response to this outbreak. The Lincolnshire Health Protection Team led and co-ordinated the response while Environmental Health Officers from the local authority visited the two identified school sites to reinforce hand hygiene measures and suggest additional measures to minimise the risk of spread. Following advice from national experts at PHE, to actively reduce the risk of disease transmission in the two school settings, all children and staff were offered vaccination and were tested for infection using salivary swab tests. Following the receipt of consent, each individual was assessed on site by a local GP as safe to receive the vaccine. The South Lincolnshire Clinical Commissioning Group (CCG) Health Protection Team were responsible for finding sufficient doses of the vaccine and for identifying healthcare staff to perform the vaccinations and salivary swabbing. In total, 681 children and 121 adults from the two school sites were vaccinated. Close contacts of those with confirmed hepatitis A were vaccinated by the GP practices.

Following these measures, there were no new linked cases of hepatitis A infection in the area. This outbreak was contained and managed successfully largely due to strong partnership working on a local and national level, along with a proactive vaccination strategy.

Influenza

Influenza (or "the 'flu") is an infectious disease caused by contagious influenza viruses, which are spread through the air by coughs or sneezes. Symptoms most commonly include a fever, sore throat, runny nose, headache, muscle ache and tiredness, and frequently last up to a week. Outbreaks of influenza can also occur in close settings, such as care homes, most frequently in the winter (Gallagher, Johnston, et. al. 2017). Whilst disease is usually self-limiting, it is potentially fatal in the very young, the elderly and in those with chronic health problems (Centres for Disease Control and Prevention, 2018). Vaccination is the best defence against flu. For people in defined high-risk groups (such as pregnant women and young children), and for those working in health and social care settings, influenza vaccinations are recommended by the World Health Organisation. There are many strains of influenza viruses, and they have the ability to evolve rapidly. For this reason, new vaccinations are developed annually based on which strains of the virus are most likely to be circulating in the forthcoming year. For those that require vaccination, it is therefore imperative that these are received every year, to provide maximum protection. There were just over 100 cases of influenza in Lincolnshire in 2016, with two outbreaks of influenza-like illness in care homes.

Case Study – Avian Influenza

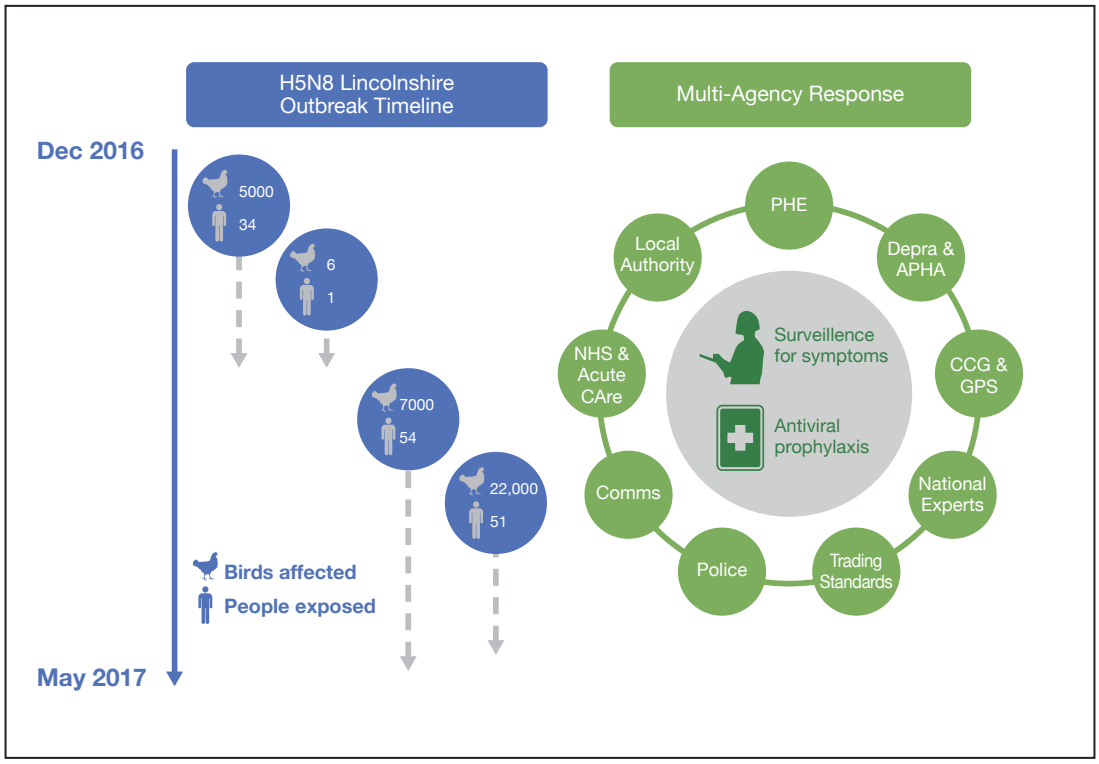
Avian influenza (or "bird flu") is caused by influenza viruses that infect wild and domestic birds. Some forms of the virus can affect humans – such as the H5N1 bird flu virus reported in 1997 – with symptoms including a high fever, cough, muscle aches, chest pain and diarrhoea. Avian flu is particularly relevant to Lincolnshire given the high density of poultry farms in the county. One particular strain of avian flu, known as H5N8, was described in 2008 and was first seen in the UK in 2014. Over the winter in 2016/17, 4 outbreaks of H5N8 avian flu were reported in flocks in Lincolnshire. Although avian influenza has the ability to cause disease in humans, there have been no reported cases from the H5N8 strain. However, there is the possibility that this strain could mutate and become infective in humans. Because of this potential risk of transmission to humans, a prompt and thorough Public Health response was required to the poultry outbreaks in Lincolnshire.

The first suspected outbreak was reported in a small flock on a weekday evening in December 2016, and a precautionary incident meeting was held the next day in order to plan the response. The day after, once the diagnosis was confirmed, PHE and CCG staff were deployed to two local sites to assess those who had been exposed to the sick flock and to distribute antiviral drugs to prevent infection. Ongoing active surveillance provided by the Health Protection Team of the high-risk exposed persons was required in the form of daily direct one-to-one contact, in order that any symptoms of influenza were detected and acted upon early.

A further 3 outbreaks in flocks occurred over the subsequent 6 weeks, all requiring urgent diagnosis in the birds, prompt identification of exposed persons, regular surveillance of exposed persons for symptoms of influenza, and antiviral prescription where required (Figure 3). This response required collaborative multi-agency working. For example, the CCGs developed Patient Group Directions (written instructions for the supply and administration of medicines to specific groups of patients) to allow certain non-prescribing healthcare workers to dispense prescription-only antivirals for those eligible, thus improving efficiency of drug administration. The PHE Health Protection Team, with support from the CCG, led the human health response including daily surveillance, while the Animal and Plant Health Agency (APHA) led the overall response and managed issues relating to animal health, crucial in limiting spread to other birds and reducing the risk to human health. The National Infection Service Respiratory Diseases Department at PHE provided expert guidance throughout. Fortunately, no exposed persons developed confirmed H5N8 avian influenza.

1. Health Protection and Communicable Disease

Figure 3: Avian influenza outbreaks in Lincolnshire, 2016-17



. *(Source: Data from HPZone)*

Vaccine Preventable Disease

Vaccinations are biological preparations that provide immunity against disease. They are the most effective method of preventing infectious disease, and have been responsible for the eradication of smallpox and the restriction of polio. The UK immunisation schedule (Public Health England, 2017b), co-ordinated and commissioned by NHS England, provides comprehensive protection against a large number of potentially dangerous infections, helping save lives, prevent unnecessary illness and minimise the consequent costs to the healthcare system. The diseases protected against in the 2018 UK routine immunisation schedule are summarised in Figure 4.

NHS England are responsible for managing the routine immunisation programme, both nationally and locally. The programme in Lincolnshire is managed by the Central Midlands Screening and Immunisations Team.

For vaccinations to be maximally effective, a large proportion of the population need to receive them. This reduces the number of people who are susceptible to infectious disease and hence limits the spread of infections. This is known as herd immunity. Coverage of childhood immunisations in Lincolnshire is generally similar to regional averages, and above national averages, but below the benchmarks required for effective herd immunity. For example, for the first MMR vaccination dose given at 2 years of age, coverage in 2016/17 was 93.1% in the county, 93.6% in the East Midlands, and 91.6% across England. However, the goal is at least a 95% vaccination rate, and further work is being done by the Screening and Immunisations Team to improve vaccination uptake in Lincolnshire, and thus minimise the consequent risk to the population.

Figure 4: The diseases protected against by the UK routine immunisation schedule, from 2018. (Vaccines against the same / related diseases are shown in the same colour).

When to immunise	Diseases protected against
2 months	Diptheria, tetanus, whooping cough, polio, *Haemophilus influenzae* type B, hepatitis B
	Pneumococcus
	Rotavirus
	Meningitis B
3 months	Diptheria, tetanus, whooping cough, polio, *Haemophilus influenzae* type B, hepatitis B
	Rotavirus
4 months	Diptheria, tetanus, whooping cough, polio, *Haemophilus influenzae* type B, hepatitis B
	Pneumococcus
	Meningitis B
12-13 months	Meningitis C, *Haemophilus influenzae* type B
	Measles, mumps, rubella
	Pneumococcus
	Meningitis B
2-8 years	Influenza (annually)
3 years and 4 months	Diptheria, tetanus, whooping cough, polio.
	Measles, mumps, rubella
12-13 years (girls)	Human papillioma virus 92 doses, 6 months apart)
14 years	Diptheria, tetanus, whooping cough, polio
	Meningitis A, C, W, Y
Pregnant Women	Whooping cough (given at 20 weeks gestation)
65 years	Pneumococcus
65 years and older	Influenza (annually)
70 years	Shingles

(Source: Patient UK, 2018)

1. Health Protection and Communicable Disease

Measles

Measles is a viral illness whose symptoms include a cough, runny nose and a rash which spreads from the face to the whole body. Transmitted through the air when an infected person coughs or sneezes, measles is extremely contagious. The complications of measles can be serious, and include pneumonia, blindness, brain infection and death (Moss, 2017). Since the introduction of the measles vaccine – which is now combined with vaccines against mumps and rubella (MMR) – the number of recorded cases have dropped significantly from hundreds of thousands to hundreds. Following the widely publicised, but incorrect, claims surrounding the side-effects of MMR in 1998 (Bates, 2011), the proportion of children being vaccinated against the disease dropped to 80% in 2003/4, and the numbers of cases and complications of measles increased significantly. Thankfully, vaccine uptake has been improving more recently, with catch-up campaigns run to protect those who were previously unvaccinated. Over the 5-year period to 2016, there have been 22 cases of confirmed measles in Lincolnshire – a rate far lower than the national figures – and annual numbers of cases have declined from 11 cases in 2012 to 1 case in 2016. Whilst these figures are encouraging, further work needs to be done to continue promotion of vaccination, with targeted approaches for those at high-risk for non-vaccination, including the travelling community and migrants.

Whooping Cough

Whooping cough is a disease of the respiratory tract that is spread through the air by coughing or sneezing. Infection is characteristically associated with cold-like symptoms followed by bursts of coughing which can last several weeks. Whooping cough in babies is particularly risky, with infants prone to developing pneumonia. When a vaccination for whooping cough was introduced in the 1950s, infection rates dropped nationally. However, in 2012, an increase in rates was noted in infants under 3 months. In order to provide additional protection to this age group, in October 2012, whooping cough vaccination was introduced for pregnant women between 16 to 32 weeks, as part of the routine immunisation schedule. This protects babies against whooping cough until they are old enough to receive their routine vaccinations at two months of age. This scheme has proved effective, with babies born to immunised mothers having a 90% reduction in their risk of developing whooping cough (Amirthalingam, Andrews et.al. 2014). In Lincolnshire, the annual number of confirmed cases of whooping cough in all age groups had steadily increased from 20 in 2014 to 100 in 2016. Some of this increase may be due to heightened awareness, with more testing done in suspected cases. A high coverage of the maternal immunisation programme needs to be maintained to provide protection to those who are too young to be immunised.

Meningococcal Disease

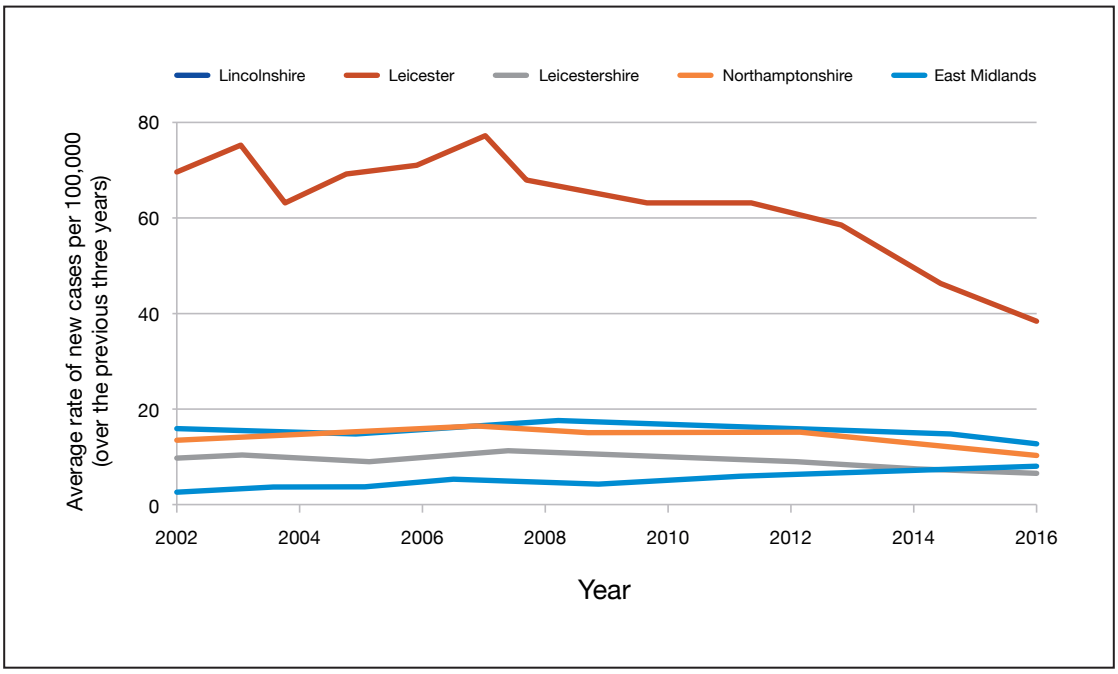
Meningitis is an infection of the lining around the brain, often caused by bacteria. Symptoms include a fever and headaches, and infection is fatal in 5% of young children and 25% of older adults. Meningitis can also cause long-term disability, such as hearing and sight loss, and epilepsy. One of the common causative bacteria, known as meningococcus, can be particularly dangerous, and can cause both meningitis and septicaemia (infection in the bloodstream). Meningococcal septicaemia is associated with a characteristic rash, which does not disappear when pressing a glass firmly against it (the "tumbler test"). Transmission is from person to person via droplets in the air, or by direct sharing of respiratory or throat secretions (saliva). There are different types of meningococcus, including types A, B, C, W and Y (Public Health England, 2017c). Meningococcus type C (MenC) vaccines were introduced into the UK immunisation schedule in 1999, and this has almost eliminated MenC in England. Since its introduction, however, there has been an increase in the number of cases of other types of meningococcal infections. In order to address this, a meningitis B vaccination was introduced into the routine UK immunisation schedule in 2015, along with an extension of the meningitis C vaccination to include types A, W and Y. In Lincolnshire in 2016, there were 9 confirmed cases of meningococcal meningitis or septicaemia – similar to the previous 2 years. The hope is that the widened protection from different types of meningococcus will reduce the frequency of cases of meningococcal disease in the coming years.

2. Tuberculosis

Tuberculosis (TB) is a bacterial infection that is transmitted through a prolonged exposure to infected respiratory secretions. Symptoms typically include a persistent cough, fever, loss of appetite and weight loss. Although it most commonly affects the lungs, TB can infect many other areas of the body, including bones, the brain and the abdomen. Treatment is vital to cure infection, and involves taking several antibiotics for 6 months or longer. The BCG vaccine is offered to at-risk persons, such as healthcare workers or children living in areas with high TB rates, to limit the risk of infection.

In 2016, there were 5664 new cases of TB identified across England, which equates to 10 new diagnoses per 100,000 people. There has been a gradual decline in TB diagnoses nationally over the previous few years, although within Lincolnshire case numbers have risen steadily year on year (Figure 5). In terms of absolute numbers of new cases, Lincolnshire compares favourably with an annual rate of 5 new diagnoses per 100,000 people – significantly lower than the East Midlands and the rest of England (Figure 6).

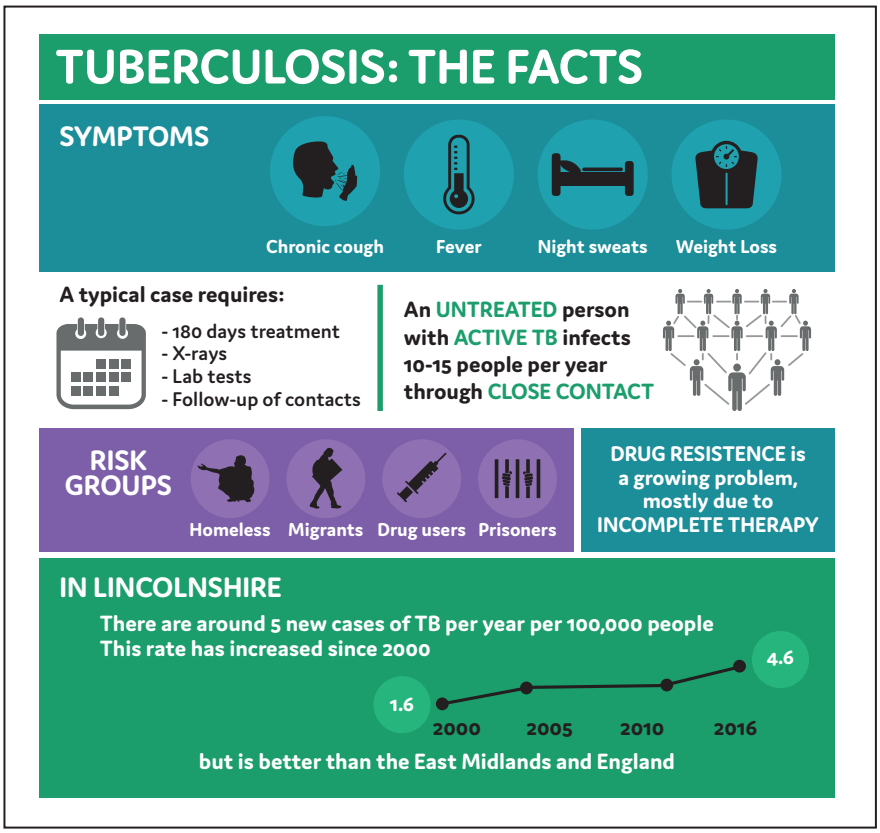
Figure 5: Time trend showing the annual rate of new cases of TB per 100,000 population in local authorities in the South East Midlands, as well as the East Midlands overall. (Data for each year is calculated from the average of that year and the preceding two years.).



(Source: Public Health England, undated)

2. Tuberculosis

Figure 6: Facts on Tuberculosis



Given the gradual rise in TB cases in Lincolnshire, our relatively low rate compared to national figures is not cause for complacency. There are specific challenges to be addressed in order to minimise the rate and adverse consequences of TB in the county. For example, despite the low rate overall in Lincolnshire, there are still a number of complex cases within specific at-risk groups in Lincolnshire, such as the homeless and other under-served populations. Indeed, nationally the rate of TB in the non-UK born population is 15 times higher than in the UK-born population, and it is 4 times higher in the most deprived compared to the least deprived (Public Health England, 2017d). A second, more widespread issue is that of drug resistance. Multidrug-resistant TB (MDR-TB) is a TB infection that does not respond to the most powerful anti-TB drugs. This makes treatment more difficult, expensive and prolonged. MDR-TB also disproportionately affects those in vulnerable groups. A further challenge is that of latent TB – where an individual has the infection, but it remains dormant whilst at risk of reactivating. Work is being done nationally to screen recent entrants to the UK from countries with a high incidence of TB, in order to identify and treat latent TB infections before they become active and infectious.

The public health management of TB occurs on both local and national levels. An East Midlands TB Control Board was established in 2015 to strengthen the co-ordination and oversight of all aspects of TB control. This board includes representation from local authority, the CCG, NHS England, hospitals, research professionals and the voluntary sector, as well as from Public Health England. A local Lincolnshire TB Control Board also acts in the primary interest of the county, and provides representation to the East Midlands TB Board, working closely with them to deliver the national TB strategy. The work of these Boards in delivering sustained improvements in TB control is monitored through the evaluation of key indicators.

2. Tuberculosis

Case Study – Tuberculosis

A child was diagnosed with TB infection in Lincolnshire. TB infection in children is unusual in this county and an incident meeting was held promptly to investigate both where the child may have acquired the infection, and assess the risk of infection to others. A multi-agency meeting was held and the decision taken that the county-wide TB service would investigate possible sources of infection by discussing potential exposures with the family. The nursery the child attended was also contacted and visited by the PHE Health Protection Team and the TB service to review any risk to others. It was identified that the child attended a number of classes but had not had close contact with all others in the nursery. The school worked closely with the health staff and provided details of all classmates and staff members who had been in contact with the case. These were then all offered screening. PHE Heath Protection Team and the TB service also held a number of sessions with staff to discuss TB infection and answer their queries, as the process had highlighted a number of anxieties. Unfortunately, there is still stigma attached to a diagnosis of TB, especially so in a county which does not have high numbers of cases.

Following screening of staff and children, no new cases were detected, and the Health Protection Team were able to reassure staff, children and parents.

The following year, a small outbreak of TB in children connected to a childcare setting occurred. This led to a large-scale screening exercise at a school – 383 individuals were invited for screening, of which 276 attended. The PHE Health Protection Team, the countywide TB service and the 4 Lincolnshire CCGs worked closely with the school to undertake this screening. Five cases of latent (non-infectious) TB infection were detected and the individuals successfully completed treatment ensuring prevention of further active (and therefore infectious) cases.

Case Study – Mobile Find-and-Treat Service

A case study which demonstrates effective multi-agency working is the use of a mobile 'Find and Treat' facility. In both Lincoln and Boston there have been clusters of cases of TB in the vulnerable homeless populations. The cases themselves have been identified, diagnosed and had treatment to cure them of the infection. However, one aspect of health protection is identifying contacts of cases who may themselves be unknowingly infected and therefore present a potential risk to others. The homeless population prove challenging in terms of identification of the individuals exposed due to a number of lifestyle factors. Multi-agency incident meetings were convened by the PHE Health Protection Team resulting in the decision to use a London-based service to support contact screening. This service comprises a large NHS van which can be moved to any location in the country. The van contains a mobile X-ray machine and can process samples for rapid identification of TB bacteria. Staff from PHE, the CCGs, healthcare provider organisations, a number of charitable and community organisations, local authority staff and the police all contributed to ensure a large number of the vulnerable groups in both Lincoln and Boston were screened and offered incentives for attending. During one of these events, 46 people had a chest X-Ray and 35 had blood tests that screen for exposure to TB. Following this screening, one active case and eight latent (non-infectious) TB cases were identified.

One particular male was invited for screening as he was a close contact of cases from an outbreak and had declined to attend all previous appointments for screening. He was of the same demographic as the outbreak cases, all of whom had waited until they were severely ill and eventually presented to the emergency department. All previous cases had required extensive hospital stays, either at tertiary facilities or in rehabilitation units, costing many thousands of pounds each. For this individual, detecting his infection early helped to prevent further onward spread of infection, avoided severe ill-health for themselves, and allowed him to be treated as an outpatient. In combination, these benefits would have also saved the NHS thousands of pounds.

3. Healthcare-Acquired Infections and Antimicrobial Resistance

Antimicrobial Resistance

Antimicrobials are substances that kill micro-organisms, such as bacteria, viruses or parasites. It is a broad term that encompasses antibiotics, which are drugs that specifically target bacteria. Antimicrobials are commonly used in healthcare to prevent or treat infectious diseases. Indeed, antibiotic use has been increasing over the previous few years, most likely due to longer courses and higher doses being prescribed. However, the more we use them, the more likely it is that infectious bugs evolve in such a way as to protect themselves from these agents. This is known as antimicrobial resistance (AMR).

Although antimicrobial resistance is a naturally occurring process, it is facilitated by the inappropriate use of antimicrobials, such as taking antibiotics for a cold or sore throat caused by viruses (Ventola, 2015). AMR threatens the effective prevention, control and treatment of infectious diseases, and is a global public health problem that requires action across all government sectors and society. As AMR becomes more widespread, we will have fewer effective antimicrobials to treat infectious diseases, which will subsequently pose a much greater risk to health. A lack of effective antibiotics would also compromise the success of major surgery and cancer chemotherapy. This issue is exacerbated by the lack of discovery of any new classes of antibiotic over the previous 30 years.

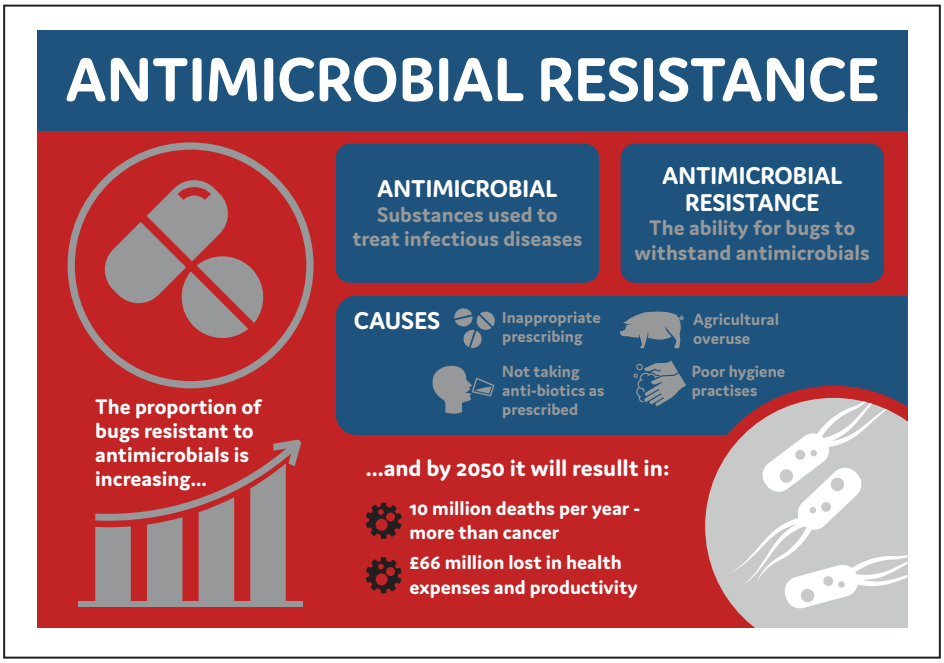
The cost of healthcare for patients with resistant infections is higher than care for those with non-resistant infections, due to a longer duration of illness, additional testing and the requirement for more expensive drugs. It is estimated that if AMR is not addressed, it will annually result in around 10 million deaths worldwide by 2050 – more than cancer – and cost the global economy £66 trillion (Figure 7) (O'Neill, 2014).

The UK has helped lead international efforts in tackling AMR, involving the World Health Organisation, the United Nations, and the G7 and G20 fora. Global acknowledgement of the risk of AMR came in September 2016, when 193 Member States adopted a UN Declaration on AMR. The UK's own review of AMR, published in 2016, resulted in a number of commitments by the government (Department of Health and Social Care, 2016). These included creating a global approach to funding the development of new antimicrobials, promoting research into new vaccines to prevent disease, improving the speed of diagnostics, enabling better prescribing, and promoting understanding and awareness of AMR. These responsibilities are being led by a variety of institutions, including Public Health England, the Department of Health, Department of Food and Rural Affairs (DEFRA), NHS England, and the Medicines and Healthcare Products Regulatory Agency. For example, Public Health England advised the NHS on incentivising the reduction of antibiotic prescriptions in GP practices – a system which has now been implemented, as described below.

Within Lincolnshire, and across the East Midlands, there is a strong collaborative network that works to drive improvements in antimicrobial prescribing and reduce antimicrobial resistance. Co-ordinated by Public Health England East Midlands, the network is involved with proactive and reactive work. Examples of proactive activities include regular reviews of the local data around AMR, conducting audits, and using the results of these to identify issues and inform action. Reactive work in AMR includes support in disease outbreaks. The AMR network also inputs into education and training, including the provision of AMR-focused events, to promote understanding and responsibility around antimicrobial prescribing.

Improving antimicrobial prescribing practices across the NHS is a difficult task, especially when there is patient demand. In order to help health practitioners, systems are now available to allow individual GP practices to see data on their own antimicrobial prescribing practices, and compare these to local and national prescribing rates. Similar data are now being collected for hospital Trusts, looking at antimicrobial prescribing, levels of resistance, and antimicrobial stewardship (defined as strategies focusing on the responsible management of antimicrobial use). Since data started being collected in 2017, the average amount of antibiotic prescribing to admissions at United Lincolnshire Hospitals NHS Trust has been about 15% lower than the rest of England. Whilst this is encouraging, this may be due to wider factors, including the type of cases seen at the Trust and the general health of Lincolnshire compared to England as a whole. Other indicators for AMR in Lincolnshire are positive, too. For example, almost 98% of hospital antibiotic prescriptions were reviewed within 72 hours in the first quarter of 2017/18 (an indicator of good antimicrobial stewardship), compared to 90% across England. The proportions of E.coli bloodstream infections that are resistant to common antibiotics are also lower compared to other areas of the country. For example, 6-8% of E.coli bloodstream infections in Lincolnshire were resistant to the cephalosporin class of antibiotics, compared with 13% across the UK. Whilst data like these are encouraging, the trends of antimicrobial prescriptions over time will provide a more useful measure of whether prescribing practices are improving, and this will be followed closely.

Figure 7: Antimicrobial resistance.



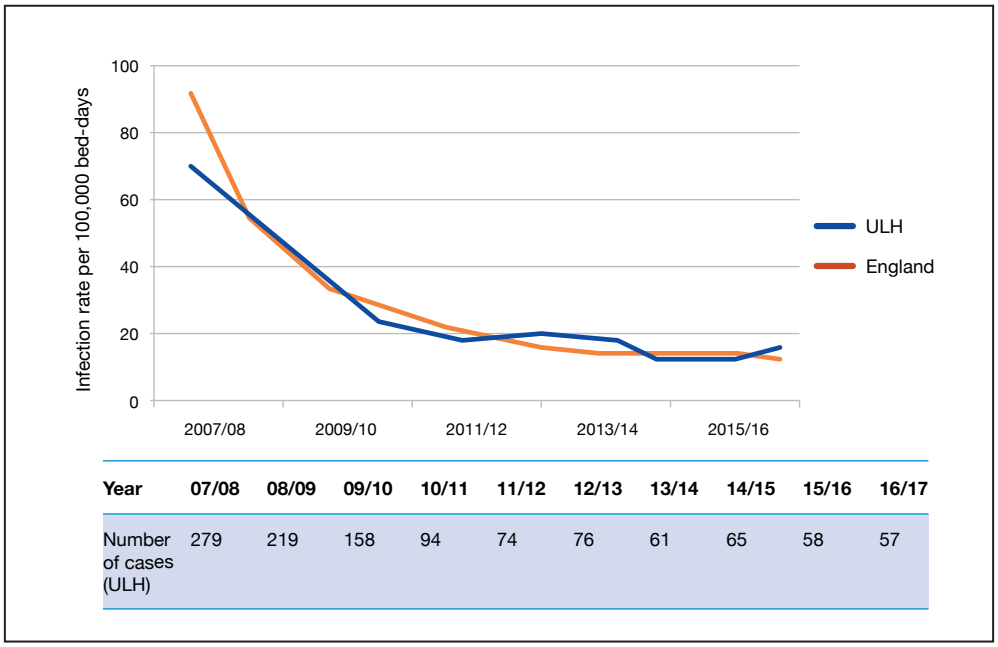
Healthcare-Associated Infections

A healthcare-associated infection (HCAI) is one that is acquired during the process of care in a hospital or other healthcare facility, and that was not present at the time of admission. HCAIs can occur anywhere in the body, but most commonly affects the gastrointestinal and respiratory systems, and the urinary tract. Common infections that result in HCAI include methicillin-resistant Staphylococcus aureus (MRSA), Clostridium difficile (C.diff) and Escherichia coli (E.coli). HCAIs are a risk for both patients and staff, and can result in significant morbidity and mortality in those infected. Across Europe, around 25,000 people die each year from hospital-acquired infections (European Centre for Disease Prevention and Control/European Medicines Agency, 2009).

During the 1990s, increasing reports of MRSA across the UK led to the introduction of mandatory surveillance of this bacterium. The use of this data, followed by a zero-tolerance approach and a system wide drive to reduce MRSA, has resulted in a consistent decline in the rate of infections from its peak in 2005. In the financial year 2016/17, there were just 232 cases of MRSA bloodstream infections in England and Wales, compared to 450 in 2013/14. The annual number of deaths has also significantly declined. An encouragingly similar trend was seen in Lincolnshire, with no MRSA infections reported in 2016/17, compared to 5 infections in 2013/14.

Another more recent example of a HCAI is C.diff – a bacterium that can be found in the gut of healthy people, and which normally causes no harm. However, some antibiotics interfere with the natural balance of bacteria in the intestine by destroying those bugs which usually prevent C.diff from multiplying. If this occurs, C.diff multiplies rapidly and produces toxins which attack the intestine, resulting in fever, diarrhoea and abdominal pain. The toxin-induced bowel inflammation can be life-threatening. Like for MRSA, evidence-informed actions and a zero-tolerance approach have started to have an effect in reducing the numbers of C.diff infections. In 2016/17, there were 57 cases of C.diff infection in United Lincolnshire Hospitals NHS Trust, giving a rate of around 15 infections per 100,000 bed-days. This is similar to the average rate across the East Midlands and in England. Over the previous decade, there has been a steady decline in the rate of C.diff infections – both locally and nationally (Figure 8). It is likely that C. diff infection rates reach a plateau rather than disappear completely, as recent research suggests that not all cases of infection are hospital-acquired (Eyre, Cule, et. al. 2013).

Figure 8: Rates of C.diff infections per 100,000 bed-days over the previous decade in United Lincolnshire Hospitals NHS Trust (ULH) compared to national rates. (Absolute numbers of cases in ULH are shown in the table below.)



Year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17
Number of cases (ULH)	279	219	158	94	74	76	61	65	58	57

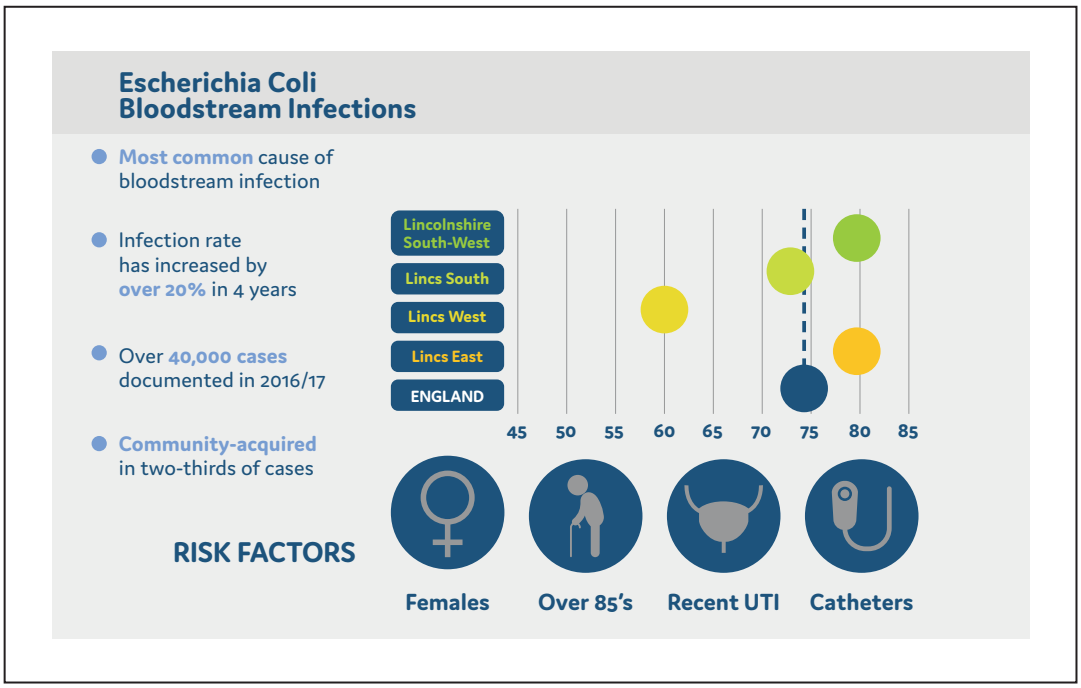
(Source: Public Health England, undated)

A third HCAI which is gaining more recent focus is E.coli bloodstream infection (BSI). This has been highlighted as particularly important as rates of infection are rising nationally, and the organism readily acquires resistance. Furthermore, E.coli is the most common cause of bacterial bloodstream infection. E.coli can enter the blood from many sources, but is most commonly secondary to urinary tract infections (40%), liver or biliary tract infection (11%) and the gastrointestinal tract (5%) (Bou-Antoun, Davies, et. al. 2016). Cases of E.coli BSI may be acquired in hospital or in the community (out of the healthcare service), with around two-thirds of cases being community-acquired. A recently published study of UK data found that of 28,600 E.coli BSI infections examined from 2011/12, there were over 5000 deaths, with 18% dying within 30 days of hospital admission overall (Abernethy, Johnson, et.al. 2015). To put this into context, that is over four times as many deaths as the highest ever single-year death tally from MRSA. Deaths were more common in males, the elderly and in cases which began in hospital. Cases caused by bacteria that were resistant to the most commonly used antibiotic had a 30% increased risk of mortality.

Across England in 2016/17, there was an average of 74 cases of E.coli BSI per 100,000 population. There was some variation within Lincolnshire, from a rate of 60 per 100,000 in Lincolnshire West CCG to a rate of 79 per 100,000 in Lincolnshire East CCG (Figure 9). This may be partly due to the differences in the proportion of older people in the CCGs. The rates of E.coli BSI across the country also appear to be linked to deprivation, with higher rates amongst the most disadvantaged. Surveillance in the UK has demonstrated that there have been year-on-year increases in the numbers of people with diagnosed E.coli BSI, from 60 cases per 100,000 in 2012/13 to 74 cases per 100,000 in 2016/17.

This increase has been cause for some concern, and the Secretary of State for Health has recently set a challenging target of reducing the number of E.coli bacteraemia infections by 50% by 2020. More work needs to be done to ascertain the different causes and risk factors for E.coli bacteraemia, and to develop and assess innovative interventions that can help reduce the number of infections. The target is an important one from a patient safety perspective, and allows an opportunity for our local Health Protection Team to work with national experts at PHE, the Department of Health, GPs, Clinical Commissioning Groups and Acute Trusts, towards a common goal. Within the East Midlands, various providers and commissioners work in partnership to share good practice. Each healthcare provider, such as the Acute Hospital Trust, Community Health Services Trust, and the Mental Health Trust, has their own internal Infection Prevention and Control (ICP) meetings to review data and information. Within Lincolnshire, individual provider and commissioner representatives also meet at county-wide Whole Health Economy ICP meetings, which Public Health England attend and vice chair.

Figure 9: E.coli bloodstream infections



4. Emerging Diseases

What is an emerging disease?

An emerging infection is one which has either newly appeared in a population, or one that has previously existed but become rapidly more common or widespread. This could be, for example, an infection that has spread to new geographical areas and populations, or the re-emergence of an old infection that has become resistant to treatment. A range of emerging infectious disease have been identified over the previous few decades, including SARS (severe acute respiratory syndrome) and new variant Creutzfeldt-Jakob disease (which causes "mad cow disease"). Most emerging infections are zoonoses – meaning that they are diseases that are known to affect animals, but that transmission can occur between animals and humans. The emergence of new infectious diseases is unpredictable, but they could become more frequent due to a number of factors, including climate change, increased world travel and better systems for detecting new diseases.

A major risk of emerging infectious diseases is their potential to become pandemics – affecting large numbers of people across many countries, or even worldwide. They are therefore a threat to global health security. The "swine flu" pandemic of 2009 caused over 18,500 deaths globally, and the historic pandemic influenza of 1918 ("Spanish flu") killed over 50 million people worldwide. Whilst it is difficult to predict the impact of an emerging infection, the rapid spread of such an infection may have a considerable effect on services in Lincolnshire and across the UK, such as on health and education, with economic disruption. The UK National Risk Register of Civil Emergencies summarises the likelihood and potential impacts of a range of risks over the next 5 years, including natural hazards and malicious attacks (Cabinet Office, 2017). In 2017, emerging infectious diseases were assessed as being moderately likely with a moderate impact – a similar risk as air pollution, and an increase in risk compared to the previous assessment in 2015. Robust action plans have been developed in order to minimise the risk of outbreaks of emerging infections, should such a threat present itself in the future. Two recent examples of emerging infections are described below.

4. Emerging Diseases

Ebola

Ebola is a viral infection thought to be carried by fruit bats which can be transmitted to, and spread between, humans by the direct contact with infected blood or bodily fluids. Symptoms include a flu-like illness, chest and abdominal pain, headaches, a rash, and internal and external bleeding (Figure 10). The fatality rate is around 50%. Between 1976, when it was first identified near the Ebola River in the Congo, to 2013, there were fewer than 2000 confirmed cases. In 2014, an epidemic arose in 3 West African countries – Guinea, Sierra Leone and Liberia – infecting almost 29,000 people and causing over 11,300 deaths. It was declared a public health emergency by the World Health Organisation. The UK contributed to the international effort in managing the epidemic by leading the international response in Sierra Leone; sending staff from the NHS, military and aid organisations; establishing Ebola treatment centres through the Department for International Development; training local healthcare workers; and committing over £400 million to ending the epidemic.

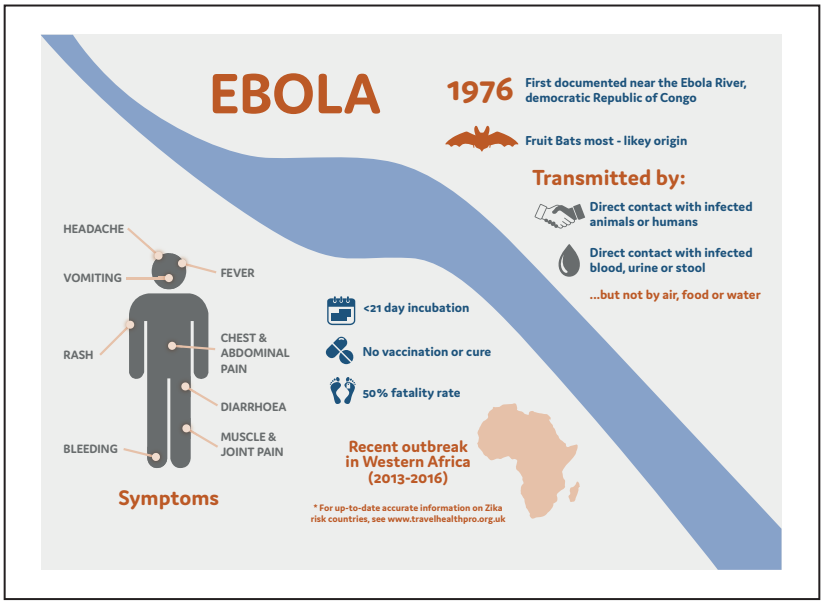
As an additional control measure, to ensure early diagnosis and prevent disease spread, PHE led and co-ordinated a response to ensure travellers from Ebola-affected countries were screened. At UK airports and the Eurostar terminal at St Pancras, passengers who had recently travelled to Liberia, Guinea and Sierra Leone had their temperature measured and completed a questionnaire to determine their risk of infection. Based on these results, there were the options of a further clinical assessment by Public Health England staff, and transfer to hospital for testing. Individuals who had no symptoms of Ebola, but who potentially could have contracted the virus, were closely monitored for 21 days (the disease's maximum incubation period). This included a number of Lincolnshire residents.

Public Health England produced a wide range of guidance documents to inform and advise professionals and the public (Public Health England, 2015). These cover all aspects of Ebola, including prevention and management in primary care and hospitals, diagnosis, assessing risk in prisons and immigration centres, screening people in airports, and disposing of potentially contaminated waste.

During the epidemic, there were only 3 confirmed cases of Ebola in UK residents – in healthcare and military staff who had volunteered in Sierra Leone. Only one of these was newly diagnosed in the UK. Although no one in Lincolnshire had acquired Ebola, plans and policies were in place for the appropriate management of suspected cases, to identify potential contacts, and to implement a range of control measures.

The Ebola epidemic was declared over in early 2016, and the ongoing risk to the UK public remains very low. A look-back exercise has been carried out to inform future actions and improve preparedness. Some of the learning from this includes the need to invest in vaccine development for potentially catastrophic epidemics, and the proposed development of a High Consequence Infectious Disease programme between Public Health England, the NHS and the Department of Health.

Figure 10: Ebola



4. Emerging Diseases

Zika

First identified in the Zika forest in Uganda in 1947, the Zika virus is known to circulate at low levels in Africa and Asia in humans, animals and mosquitoes. Only a few outbreaks were noted before 2015. In May 2015, the first Brazilian case was documented. Since then, Zika infection has been reported in many countries in South and Central America, the Caribbean, South-East Asia and Oceania (Figure 11). Zika infection is usually mild and self-limiting, although the majority of infected individuals develop no symptoms. Symptoms include fever, headache, joint pain and a rash that lasts for less than seven days. The major complication of the Zika virus is infection during pregnancy, which can result in brain malformations in the unborn child.

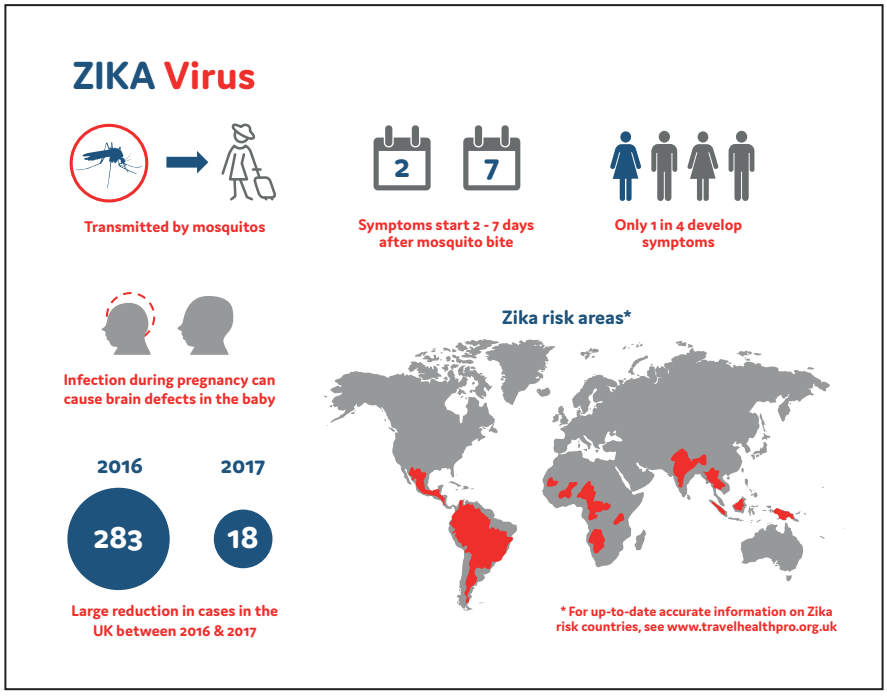
The Zika virus is transmitted by the mosquito Aedes aegyptii. This mosquito does not live in the UK, so cases seen here are almost exclusively associated with travel to areas with active Zika virus transmission. Public Health England run a mosquito surveillance scheme using mosquito traps to monitor the population dynamics and species distribution across the UK.

In 2016, there were 283 cases of Zika infection in the UK, of which 7 were in pregnant women. All but one were associated with foreign travel (with the other case being sexually transmitted). From January to November 2017, there were 18 cases of Zika infection – far fewer than the previous year – and may in part be due to advice given to those considering travel to Zika-affected areas. Less than 5 cases of Zika infection have been noted in Lincolnshire, all following travel abroad.

The advice from Public Health England is based on the primary concern of avoiding infection during pregnancy. Pregnant women are advised to avoid non-essential travel to Zika-affected areas, and other travellers should follow published bite-prevention advice. Detailed travel health advice is hosted by the National Travel Health Network and Centre (NatHNaC) website (National Travel Health Network and Centre, 2017). To minimise the risk of sexual transmission of the disease, all males should use barrier contraception for 6 months following return from travel to Zika-affected areas, as the virus can live in the semen. Women should avoid conception for 8 weeks after returning from travel. Unfortunately, there is currently no vaccine or specific treatment for the infection (Public Health England, 2017e).

Public Health England have also published guidance for healthcare professionals to aid in the assessment and management of pregnant women and babies with potential Zika infection. These have been developed in collaboration with other medical professional bodies, including the Royal College of Obstetricians and Gynaecologists and the Royal College of Midwives.

Figure 11: Zika virus



5. Chemical And Environmental Hazards

Summary of Key Chemical and Environmental Hazards

Environmental public health incidents often require an integrated response from several Centres within PHE. The Centre for Radiation, Chemical and Environmental Hazards (CRCE) works in partnership with Health Protection Teams, along with Communications and Emergency Planning teams, to provide expert advice and support to a range of stakeholders during acute and longer-term environmental incidents which have the potential to threaten health. Such incidents could involve fires, chemical contamination of the environment (air, water, land), or exposure to chemicals and poisons, including deliberate release.

CRCE reviews the evidence base and produces position statements and resources for contentious facilities, such as energy-from-waste incinerators, shale gas and landfill sites, and establishments storing or handling large quantities of hazardous industrial chemicals – known as COMAH (Control of Major Accident Hazards) sites. CRCE also performs similar functions for common incident types, including protracted fires.

PHE works closely with the Lincolnshire Resilience Forum to ensure suitable and effective multi-agency emergency preparedness for potential major incidents, including at upper-tier (higher risk) COMAH sites, high-risk waste sites and Major Accident Hazard Pipelines (which include high-pressure natural gas supply pipelines, as well as pipeline systems transporting oils, chemical and other gases). PHE provides expert responses to consultations on significant facilities or infrastructure development and can provide impartial support to public engagement and public meetings.

Case Study – sulphur mustard incident in Lincolnshire

PHE was alerted on the 3rd October, 2017 to an incident involving a member of the public who had potentially been exposed to sulphur mustard (i.e. mustard gas) in Lincolnshire. Six small canisters were found in a forested area nearby to a former military base. Two canisters were originally discovered and disturbed, but these were likely part of a wider cache. A Strategic Co-ordination Group – whose function is to co-ordinate multi-agency responses during major events – was called to direct the safe management of this incident, and to ensure appropriate investigation and decontamination. In total, 150 canisters of sulphur mustard were uncovered. PHE provided expert advice and contributed to the multi-agency communication process and dynamic risk assessments.

Air Pollution

Air pollution impacts on public health, the natural environment, and the economy. Poor air quality is the largest environmental risk to public health in the UK (Holgate and Stokes-Lampard, 2017). It is known to disproportionately affect vulnerable groups, for example the elderly, children and people already suffering from pre-existing health conditions, such as respiratory and cardiovascular disease (Sacks, Stanek et.al. 2011). PHE facilitate the East Midlands Air Quality Network, a cross-disciplinary network which includes professionals from Public Health, Environmental Health professionals, and spatial and transport planners. This network encourages collaborative working at a regional scale and the sharing of best practice, with the aim of reducing air pollution impacts and inequalities, and ensuring health is considered at an early stage in policy and intervention development. CRCE supports PHE within the East Midlands by providing expert scientific advice to Air Quality Cells (quick-response teams that co-ordinate air quality monitoring in major pollution incidents), Scientific and Technical Advice Cells (who provide co-ordinated scientific and technical advice during the response to an emergency) and other multi-agency meetings.

5. Chemical And Environmental Hazards

Surface and Coastal Flooding

Flooding can result in loss of life, damage to buildings, travel disruption and dangers from fast-flowing water. It can also result in indirect effects, such as difficulties in access by emergency services, and adverse mental health effects in those who are subsequently displaced (Munro, Kovats, et al., 2017) Lincolnshire has a large fluvial (river) and tidal floodplain, covering almost 40% of the county. In order to minimise the risk of flooding, this floodplain almost entirely relies on manmade defences, such as walls, embankments and pumping stations. A number of main rivers pass through urban areas of the county, such as the River Trent and the River Witham, putting around 18,000 properties at risk from fluvial flooding. Flooding can also result from excessive rainfall, such as surface water flooding, which occurs when rainfall exceeds the capacity of piped drainage systems, or as a result of overland flow following intense rainfall. Lincolnshire County Council is the Lead Local Flood Authority, and thus is the lead responding agency in surface water flood incidents, as well as being responsible for assessing, mapping and planning for local flood risk.

The annual chance of flooding to coastal communities in Lincolnshire is estimated to be between 0.5% (1 in 200) and 2% (1 in 50). This risk is low largely due to man-made defence systems. Whilst the probability of coastal flooding is low, this risk is likely to increase with climate change, which is predicted to result in a rise in the sea level by 1 metre over the next 100 years. Much of the land behind tide defences in Lincolnshire is below average sea level, and extends up to 10km inland, forming the largest single area at flood risk in the country. The consequences of a severe tidal surge are therefore potentially high. The Environment Agency are responsible for coastal flood defences (as well as main river defences), and thus work in partnership with Lincolnshire County Council as lead responders for flooding incidents.

Comprehensive response plans have been developed in order to address the potential risks of coastal and inland flooding. These plans are based on local risk assessments which suggest a moderate risk of flooding in the county, with a potential impact ranging from local disruption to travel, to possible damage to buildings. Three key strategies are encompassed within such response plans. These are: (a) pre-deployment of assets where there is some warning time, such as national flood rescue services; (2) the removal of people from danger, including preventative evacuation; and (3) the protection of local infrastructure and essential services.

Conclusions and Recommendations

There is evidence and assurance of effective systems being in place to monitor known hazards to health in Lincolnshire. The participation of our health systems in national and international systems of surveillance gives some assurance that new and emerging threats would be identified, investigated and mitigated where possible.

However, I ask that the organisations responsible for protecting the health of local people consider the following recommendations:

1. *The Health Protection Board, Clinical Commissioning Groups (CCGs) and Healthcare Providers continue to innovate to promote the uptake of immunisation and vaccination programmes across our entire population.*
2. *The Health Protection Board, CCGs and Healthcare Providers provide assurance and evidence of improvement in the uptake of immunisation and vaccination programmes in populations where protection is more limited, particularly in East Lincolnshire.*

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Executive

Open Report on behalf of Richard Wills, Executive Director responsible for Democratic Services

Report to:	**Executive**
Date:	**05 June 2018**
Subject:	**Representation on Outside Bodies**
Decision Reference:	**I015730**
Key decision?	**No**

Summary:

To consider the Outside Body List applicable to the Executive as detailed at Appendix A, and to note the appointment changes by the Leader and Executive Councillors since 6 June 2017, as detailed at Appendices B and C.

Recommendation(s):

That the Executive

1. Considers the Outside Body list at Appendix A and approves the list or makes amendments to it.

2. Notes the current appointments made by the Leader and Executive Councillors under delegated authority as set out in Appendices B and C to the report.

Alternatives Considered:	
1.	To not make appointment to the outside bodies as detailed.

Reasons for Recommendation:

To continue to provide Council representation on organisations, as part of the County Council's community leadership role.

1. Background

The Council's Constitution provides for appointment to joint committees of more than one local authority and those bodies the membership of which is politically

balanced, to be made by the County Council, and such appointments were made on 19 May 2017 for the Council term.

Under Part 3 of the Council's Constitution the Executive has responsibility to make appointments to all other outside bodies.

This report seeks consideration by the Executive of the appointments set out in Appendix A and either approval of the appointments set out in Appendix A or approval of the amendments the Executive would wish to make to the Appendix.

The report also provides information for noting as to the appointments made by the Leader of the Council and Executive Councillors under delegated authority (see Appendix B and Appendix C). The two Appendices B and C show the following changes made since these were last provided to the Executive in June 2017

Appointments delegated to the Leader of the County Council (Appendix B)

The following appointment changes have been made:

- Historic Environment Advisory Panel – Councillor B Aron was replaced by Councillor L A Cawrey
- Lincolnshire Partnership NHS Foundation Trust – Council of Governors (Stakeholder Group) Councillor Mrs K Cook was appointed as the Council's second representative
- Mid-Lincolnshire Local Access Forum – Councillor C E H Marfleet was replaced by Councillor C L Strange
- Usher Trust – Councillor W J Aron was replaced by Councillor R B Parker

The Leader of the Council is no longer required to make appointments to the following organisations, which have therefore been removed from the list.

- Community Lincs – Company Member
- Active Lincolnshire
- Regeneration and Tourism Advisory Group (Lincoln City)

There are some vacancies as highlighted in bold in the list at Appendix B.

Appointments delegated to Executive Councillors (Appendix C)

Due to the absorption of Rail North into the structure of Transport for the North with effect from 1 April 2018. Councillor C J T H Brewis was appointed as the Council's representative and Councillor R A Renshaw was appointed as the substitute member by the Executive Councillor for Highways, Transport and IT.

The Executive Councillor for Adult Care, Health and Children's Services is no longer required to make appointments to the following organisations, which have therefore been removed from the list.

- Cordeaux Academy
- Gainsborough Academy

- Manor Leas Academy
- Priory Trust Academy
- Sleaford St Georges Academy Trust

There are some vacancies as highlighted in bold in the list at Appendix C.

Legal Issues:

Equality Act 2010

Under section 149 of the Equality Act 2010, the Council must, in the exercise of its functions, have due regard to the need to:

* Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act

* Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it

* Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

The relevant protected characteristics are age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation

Having due regard to the need to advance equality of opportunity involves having due regard, in particular, to the need to:

* Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic

* Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it

* Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low

The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities

Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to tackle prejudice, and promote understanding

Compliance with the duties in section 149 may involve treating some persons more favourably than others

The duty cannot be delegated and must be discharged by the decision-maker. To discharge the statutory duty the decision-maker must analyse all the relevant material with the specific statutory obligations in mind. If a risk of adverse impact is identified consideration must be given to measures to avoid that impact as part of the decision making process.

The Executive must have regard to the above considerations in determining appointments.

Joint Strategic Needs Analysis (JSNA) and the Joint Health and Wellbeing Strategy (JHWS)

The Council must have regard to the Joint Strategic Needs Assessment (JSNA) and the Joint Health & Well Being Strategy (JHWS) in coming to a decision

There are not considered to be any direct implications.

Crime and Disorder

Under section 17 of the Crime and Disorder Act 1998, the Council must exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in its area (including anti-social and other behaviour adversely affecting the local environment), the misuse of drugs, alcohol and other substances in its area and re-offending in its area

There are not considered to be any direct implications.

2. Conclusion

The report seeks approval for the appointments to outside bodies which are the responsibility of the full Executive by either approving or amending the list at Appendix A. The Report also invites the Executive to note the appointment changes made by the Leader and the Executive Councillors since 6 June 2017.

The appointment to all organisations listed in Appendices A, B and C will assist Councillors in participating strategically and in the wider community. It will also provide Councillors with additional knowledge and expertise which can be shared with other Councillors.

3. Legal Comments:

The recommendations are lawful and within the remit of the Executive.

4. Resource Comments:

There are no material financial implications arising from acceptance of the recommendations in this report.

5. Consultation

a) Has Local Member Been Consulted?

n/a

b) Has Executive Councillor Been Consulted?

Yes

c) Scrutiny Comments

This has not been considered by a scrutiny committee.

d) Have Risks and Impact Analysis been carried out?

No

e) Risks and Impact Analysis

Not Applicable

6. Appendices

These are listed below and attached at the back of the report	
Appendix A	List of Appointments made by the Executive
Appendix B	List of Appointments Delegated to the Leader of the Council
Appendix C	List of Appointments Delegated to Executive Councillors

7. Background Papers

Document title	Where the document can be viewed
Executive Report dated 6 June 2017 - Representation on Outside Bodies	Democratic Services

This report was written by Katrina Cope, who can be contacted on 01522 552104 or Katrina.cope@lincolnshire.gov.uk .

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APPENDIX A

APPOINTMENTS TO BE MADE BY THE EXECUTIVE

NAME OF BODY	NUMBER OF APPOINTMENTS	APPOINTEE
Community Lincs – Board	1	Cllr B Young
County Councils Network	4	Cllr M J Hill OBE Cllr Mrs P A Bradwell Cllr R G Davies Cllr R B Parker
East Midlands Councils	1 + 1 alternate rep	Cllr M J Hill OBE Cllr Mrs P A Bradwell
East Midlands Councils – Executive Board	1	Cllr M J Hill OBE
East Midlands Councils – Management Group	1	Cllr M J Hill OBE
East Midlands Councils – Regional Employers' Board *(expression of interest only)*	1	Cllr I G Fleetwood
East Midlands Councils – Regional Joint Council *(expression of interest only)*	1	Cllr I G Fleetwood
East Midlands Councils – Strategic Migration Partnership Board *(expression of interest only)*	1	Cllr Mrs P A Bradwell
Greater Lincolnshire Local Enterprise Partnership Company Limited *(incorporation as a company limited by guarantee)*	1 + 2 *nominations (both appointed)	Cllr C J Davie *(Director)* *Richard Wills *(Director)* *Chairman of Environment and Economy Scrutiny Committee – Cllr A Bridges *(Member)*
Lincolnshire Waste Partnership	1	Cllr E J Poll
Local Government Association – General Assembly	4	Cllr M J Hill OBE Cllr Mrs P A Bradwell Cllr C N Worth Cllr Mrs A M Newton
Rural Services Network (SPARSE)	1 + 1 substitute	Cllr M A Whittington Delegated to the Leader of the Council

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APPENDIX B

APPOINTMENTS TO BE DELEGATED TO THE LEADER OF THE COUNTY COUNCIL

NAME OF BODY **Key Strategic Partnerships and Memberships**	**NUMBER OF APPOINTMENTS**	**APPOINTEE**
East Midlands Adult Social Care and Health Councillor Network	2	Mrs P A Bradwell Mrs S Woolley
East Midlands Health & Wellbeing Chairs Network	1	Mrs S Woolley
East Midlands Lead Member Network for Children's Services	1	Mrs P A Bradwell
East Midlands Museums Service	2	C N Worth ***1 vacancy***
East Midlands Rural Affairs Forum *(expression of interest only)*	1	C Davie
Local Government Association – Coastal Issues Group	1	E J Poll
Local Government Association – Fire Service Commission	1	C N Worth
Local Government Association – Inland Flood Risk Management Group	1	E J Poll
Pensions Fund Forum – Local Authorities	1	E W Strengiel

NAME OF BODY **Membership on Non-Strategic Countywide Committees-**	**NUMBER OF APPOINTMENTS**	**APPOINTEE**
Battle of Britain Memorial Flight Visitor Centre Trustees	1	T R Ashton
Council for Protection of Rural England – Lincolnshire Branch	2	M J Storer ***1 vacancy***
East Midlands Reserve Forces & Cadets Association – Lincolnshire County Committee	1	R L Foulkes
Fields in Trust	1 1 substitute	***1 vacancy*** ***1 vacancy***
Heritage Trust of Lincolnshire – Advisory & Liaison Committee	1	C N Worth
Heritage Trust of Lincolnshire - Trustees Board	1	W J Aron
Humberside International Airport Consultative Committee	1	A Bridges
Investors in Lincoln – Director	1	C J Davie
Lincolnshire Association of Local Councils	1	Mrs J Brockway
Lincolnshire Forum for Agriculture & Horticulture	1	M J Storer

NAME OF BODY	NUMBER OF APPOINTMENTS	APPOINTEE
Lincolnshire Partnership NHS Foundation Trust – Council of Governors (Stakeholder Group)	2	R Oxby Mrs K Cook
Lincolnshire Road Safety Partnership	3	M Brookes R G Davies C J T H Brewis
Lincolnshire Wildlife Trust – Biodiversity Steering Group	1	M Brookes
Mid-Lincolnshire Local Access Forum	2	W J Aron C L Strange
R.E.L.A.T.E. - Board of Trustees *(The Council are not entitled to a seat on this Body - Cllr Mrs M J Overton MBE sits on this board as she is a Trustee)* **(FOR INFORMATION ONLY)**	N/A	N/A
Doncaster Sheffield Finningley Airport Consultative Committee	1 + 1 substitute	Mrs C Perraton-Williams ***1 vacancy***
Shoreline Management Plan – The Wash to Norfolk Coast	2	C J Davie E J Poll
Shoreline Management Plan – Humber Estuary Coastal Authorities Group	2	C J Davie E J Poll
Society for Lincolnshire History & Archaeology – Executive Committee	1	C J Davie
South Lincolnshire & Rutland Local Access Forum	2	B Adams R Wootten
Usher Trust	1	R B Parker
Whisby Natural Park Steering Board	3	Dr M E Thompson Mrs J E Killey S P Roe

NAME OF BODY **Local Organisations with County Council Representations**	**NUMBER OF APPOINTMENTS**	**APPOINTEE**
First College	2	S R Kirk ***1 vacancy***
Grantham Canal Partnership	1	A N Stokes
Grantham Growth Strategic Board	2	R G Davies M J Hill OBE
Historic Environment Advisory Panel	1	L A Cawrey
Lawrance Park Community Association – Management Committee	1	R P H Reid
Lincoln BIG (Business Improvement Group)	1	C J Davie
Lincoln Civic Trust Ltd – Council	1	C N Worth
Louth United Charities	2	A Bridges D McNally
OneNK Stakeholders Panel	2 + 1 substitute	*Appointments from 2017 to 2019* A G Hagues M J Storer ***1 vacancy***
Spalding Energy Project – Community Liaison Group	1	Mrs C J Lawton
Stamford Mercury Archive Trust	1	R L Foulkes
Sutton Bridge Power Station Liaison Committee	1	C J T H Brewis
Wash & North Norfolk Coast European Marine Site	2	P E Coupland P A Skinner
Willoughby Memorial Trust *(nomination only)*	2 1 Officer	R P H Reid Mrs S Woolley *(Appointed by the Trust)*

APPENDIX C

APPOINTMENTS TO BE DELEGATED TO EXECUTIVE COUNCILLORS

NAME OF BODY	NUMBER OF APPOINTMENTS	APPOINTEE
Executive Councillor for Adult Care, Health and Children's Services		
33 Northolme, Gainsborough - Children's Home	1	Mrs C L Perraton-Williams
67 Albion Street, Spalding - Children's Home	1	Mrs C J Lawton
91 Eastgate, Sleaford - Children's Home	1	A G Hagues
Adoption and Permanence Panel 'A'	1	S R Dodds
Adoption and Permanence Panel 'B'	1	***1 vacancy***
The Beacon, Grantham - Children's Home	1	M A Whittington
Fostering Panel	1	***1 vacancy***
Haven Cottage, Boston - Children's Home	1	R L Foulkes
Peterborough & Stamford Hospitals NHS Foundations Trust – Partner Governor	1	Peterborough – R Wootten Stamford – D Brailsford
Skegness Day Centre Limited	1	C S Macey
Sleaford Rookery Avenue, Secure Unit – Children's Home	1	Mrs K Cook
STRUT House, Lincoln - Children's Home	1	Dr M E Thompson

NAME OF BODY	NUMBER OF APPOINTMENTS	APPOINTEE
Executive Councillor for Economy and Place		
Boston Woods Trust	2	Mrs A M Austin ***1 vacancy***
Skegness Partnership Board Limited	1	C J Davie
Executive Councillor for Highways, Transport, I.T.		
PATROL (Parking and Traffic Regulations outside London)	1 1 substitute	M Brookes ***1 vacancy***
Public Transport Consortium	3	C J T H Brewis R G Davies M Brookes
Transport for the North *(w.e.f 01.04.2018)*	1 1 substitute	C J T H Brewis R Renshaw *(substitute)*

Lincolnshire COUNTY COUNCIL Working for a better future

Executive

**Open Report on behalf of Richard Wills,
Director responsible for Democratic Services**

Report to:	**Executive**
Date:	**05 June 2018**
Subject:	**Impact of the Part Night Street Lighting Policy Scrutiny Review – Final Report**
Decision Reference:	**N/A**
Key decision?	**No**

Summary:

On 26 April 2018, the Overview and Scrutiny Management Board approved the attached scrutiny report on the 'Impact of the Part Night Street Lighting Policy Scrutiny Review' for submission to the Executive. The report makes a total of five recommendations. The Executive is requested to receive the report and make arrangements for responding to the report by 5 September 2018. This is to comply with the legal requirement contained in the Local Government Act 2000 section 9FE requiring the Executive to respond within two months.

Recommendation(s):

1) That the Executive consider the scrutiny review on Impact of the Part Night Street Lighting Policy

2) That the Executive make arrangements to respond to the report by 5 September 2018. The Executive is requested to ask the relevant Executive Councillor:

   (a) to indicate in the response which recommendations have been accepted; and

   (b) where recommendations are accepted, to bring forward an action plan for their implementation.

Alternatives Considered:

The Executive is legally required to respond to the report within two months. The Executive has the option to accept or not accept each of the recommendations included in the report.

Reasons for Recommendation:

To comply with the legislative and constitutional requirement on the Executive to consider and respond to reports from overview and scrutiny committees within two months.

1. Background

The Overview and Scrutiny Management Board agreed at its meeting on 27 July 2017 to undertake a scrutiny review on the Impact of the Part Night Street Lighting Policy. The purpose of the scrutiny review was to look at the impact of the change in the Street Lighting Policy to turn street lights off in certain areas at midnight. The review considered a number of different areas where there may have been an impact, either positive or negative, as a result of this change.

The main lines of enquiry for the scrutiny review were as follows:

1. To consider key national and local documents and guidance in relation to the Part Night Street Lighting Policy.
2. To examine the impact of switching off street lights at midnight on different areas such as on the environment; crime rates; fears about safety and crime; emergency services; health and public health services.
3. To consider data and substantiated evidence, such as crime rate figures, accident data, complaint figures, and exemption requests, regarding the impact of the Part Night Street Lighting Policy.
4. To consider the wider economic impact of Part Night Street Lighting on business, including the impact on the night time economy.
5. To invite the views of members of the public, County Councillors, district councils and parish/town councils regarding the perceived impact on crime rates, and fears of crime and safety.
6. To conduct comparisons with other Local Authorities who have also changed their street lighting policy to incorporate part night lighting.
7. To investigate potential savings or cost implications arising from any proposed changes to the Part Night Street Lighting Policy within the allocated budget.

The attached report on Impact of the Part Night Street Lighting Policy Scrutiny Review was approved by the Overview and Scrutiny Management Board at its meeting on 26 April 2018.

The report reflects the work of one of the Council's Scrutiny Panels, which comprised of eight non-Executive Councillors. The membership of the Scrutiny Panel comprised Councillor(s): Mrs A M Newton (Chairman), S R Kirk (Vice-Chairman), G E Cullen, D McNally, P A Skinner, A N Stokes, M J Storer and Mrs R H Trollope-Bellew.

The review considered a number of different areas where there may have been an impact, either positive or negative, as a result of the change to part night lighting

and includes five recommendations based on its findings where improvements could continue to be made.

The Executive is invited to consider the report and assign responsibility to the relevant Executive Councillor for responding to the report. The formal response will be considered at a future meeting of the Overview and Scrutiny Management Board.

As part of its response, the Executive is requested to indicate to the Overview and Scrutiny Management Board which recommendations in the report are accepted. Where recommendations are accepted, there is also a request for an action plan, showing what steps are being taken to implement the recommendations, with projected timescales, where possible. This will enable the Overview and Scrutiny Management Board to monitor the implementation of any actions arising from the report.

2. Legal Issues:

Equality Act 2010

Under section 149 of the Equality Act 2010, the Council must, in the exercise of its functions, have due regard to the need to:

- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act
- Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
- The relevant protected characteristics are age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation

Having due regard to the need to advance equality of opportunity involves having due regard, in particular, to the need to:

- Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic
- Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it
- Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low

The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities

Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having

due regard, in particular, to the need to tackle prejudice, and promote understanding

Compliance with the duties in section 149 may involve treating some persons more favourably than others

The duty cannot be delegated and must be discharged by the decision-maker. To discharge the statutory duty the decision-maker must analyse all the relevant material with the specific statutory obligations in mind. If a risk of adverse impact is identified consideration must be given to measures to avoid that impact as part of the decision making process

The Scrutiny Review Report contains data and feedback concerning the impacts of the existing policy including analysis of the feedback in terms of age as a protected characteristic. This data and feedback should be considered by the Executive in responding to the Report.

Joint Strategic Needs Analysis (JSNA and the Joint Health and Wellbeing Strategy (JHWS)

The Council must have regard to the Joint Strategic Needs Assessment (JSNA) and the Joint Health & Well Being Strategy (JHWS) in coming to a decision

The Scrutiny Review Report contains data and feedback concerning the impacts of the existing policy including its impact on the health and wellbeing of residents. This data and feedback should be considered by the Executive in responding to the Report.

Crime and Disorder

Under section 17 of the Crime and Disorder Act 1998, the Council must exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in its area (including anti-social and other behaviour adversely affecting the local environment), the misuse of drugs, alcohol and other substances in its area and re-offending in its area

The Scrutiny Review Report contains data and feedback concerning the impacts of the existing policy including its impact on crime and anti-social behaviour and fear of crime and anti-social behaviour. This data and feedback should be considered by the Executive in responding to the Report.

3. Conclusion

In accordance with section 9FE of the Local Government Act 2000 this Report constitutes notice from the Overview and Scrutiny Management Board requiring the Executive to consider the Impact of the Part Night Street Lighting Policy Scrutiny Review report and to provide and publish a response to the Board indicating what, if any, action the Executive proposes to make. The Executive is requested to make arrangements to respond to the report by 5 September 2018.

4. Legal Comments:

The Report introduces the results of a scrutiny review on the Impact of the Part Night Street Lighting Policy. The Report is submitted under section 10 of the Overview and Scrutiny Procedure Rules in the Constitution. The Report contains a notice from the Overview and Scrutiny Management Board under section 9FE of the Local Government Act 2000 and the Executive is required by section 9FE(5) of that Act to comply with the requirements specified in the notice.

5. Resource Comments:

There are no significant financial implications arising from the recommendations in this report, i.e. for the Executive to review the report and make arrangements to respond to it. Financial implications may arise subject to the Executive Councillor subsequently accepting recommendations included in the report and the action plan that is developed. Any such implications will be dealt with, as required, through the normal budget setting process.

6. Consultation

a) Has Local Member Been Consulted?

N/A

b) Has Executive Councillor Been Consulted?

Yes

c) Scrutiny Comments

The final report on the Impact of the Part Night Street Lighting Policy Scrutiny Review was considered and approved at the meeting of the Overview and Scrutiny Management Board on 26 April 2018.

In addition, the following comments were highlighted by the Overview and Scrutiny Management Board for consideration by the Executive.

- One member of the Board suggested that people, in general, were not used to the dark anymore and that crime was only one factor to be considered;

- Concern was noted in relation to shift workers who had very early starts or very late finishes. This was acknowledged but the cost to make alterations were significant and it would be near impossible to identify where shift workers lived and which lights should be extended; It was suggested that options should be given to Parish Councils to have the flexibility to request changes to the timings but at their own cost as part of Recommendation 5;
- One member mentioned the health benefits of turning the street lights off as the dark helped to produce melatonin which was required to help the brain recognise when it was time to sleep and time to wake. Many people suffer from sleep deprivation and it was suggested that excessive lighting at night may be a factor;
- The Board was advised that a study had been undertaken by Exeter University which suggested that areas lit by LED lamps (blue light) were at risk of serious health issues, particularly men who were reportedly twice as likely to develop prostate cancer and women who were 1.5 times as likely to develop breast cancer due to the effect of blue light on melatonin. This issue had been specifically considered and, as a result, warmer white lights were used in residential areas and blue light LED lights only on traffic routes;
- Since the implementation of the scheme, it was reported that the habits of some parishioners had changed which, in turn, was affecting churches. Midnight mass had been moved, in some areas, to 10.00pm to allow the congregation to walk home safely;
- Liaison between the police and Student Union and pensioner groups was encouraged in order to promote street safety at night;
- A percentage breakdown of crime between the hours of midnight and 6.00am was requested. Members were advised that this data was available from Lincolnshire Police but that the part-night street lighting had not been in place long enough to compare the correlation between crime in those areas since the switch-off. It was agreed that this would be presented on a rolling basis.

The Overview and Scrutiny Management Board agreed that the report was a very good piece of scrutiny work and one which would be advocated to the Executive.

d) Have Risks and Impact Analysis been carried out?

N/A

e) Risks and Impact Analysis

N/A

7. Appendices

These are listed below and attached at the back of the report	
Appendix A	Review of Impact of the Part Night Street Lighting Policy – Final Report

8. Background Papers

The background papers within Section 100D of the Local Government Act 1972 used in the preparation of this report are the Background Information items described in the Scrutiny Review Report.

This report was written by Daniel Steel, Scrutiny Officer, who can be contacted on 01522 552102 or Daniel.Steel@lincolnshire.gov.uk .

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Impact of the Part Night Street Lighting Policy Scrutiny Review

April 2018

Lincolnshire COUNTY COUNCIL

Working for a better future

Contents

Foreword

This review has looked at the impact of the change in the Street Lighting Policy to turn street lights off in certain areas between midnight and 6am. The review has considered topics including the environment, road collisions, crime rates, fears about safety and crime, emergency services, health and public health services, the impact on businesses and the night time economy.

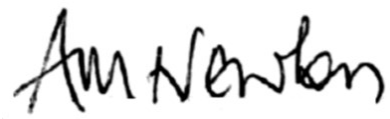
A key aim of this review has been to ensure that the Council's Street Light Policy in relation to part night lighting is being managed to minimise any adverse impact on the communities in Lincolnshire affected by the changes.

The views of the public and partner organisations have been at the heart of this review and I and the Scrutiny Panel would like to express our thanks to everyone who has contributed.

Lincolnshire remains one of the safest areas in the country, however this review has highlighted that while at this stage there is no clear link between part night lighting and an increase in crime, there here has been a negative public perception in the sense of an increased fear of crime in some areas.

The Scrutiny Panel hopes that this report will present a practical way forward to deal with the issues and concerns raised through this process and address the concerns and worries of residents in Lincolnshire going forward.

I would like to thank the Scrutiny Review members for their contributions and hard work throughout the review. I would also like to thank all the officers who have supported the review who have all provided valuable support to the panel during the review.



Councillor Angela Newton

1. Executive summary

The Scrutiny Panel was established in October 2017 with the purpose of reviewing the impact of the Part Night Street Lighting Policy following the wider introduction of Part Night Street Lighting in Lincolnshire. The Scrutiny Review Panel met nine times over the course of the review during which time it considered information from a number of sources relating to the County Council's use of Part Night Street Lighting.

1.1 Conclusions

- Overall crime is up by 4% in Lincolnshire where the national average stands at an 11% rise. Lincolnshire remains the fourth safest area in the country.
- There has been no noticeable change in the number of overnight burglary, vehicle and personal robbery offences across the county as reported by Lincolnshire Police.
- The number of reported criminal damage offences has increased, although not consistently across the county; it cannot be concluded that street lighting has impacted on levels of criminal damage recorded for Lincolnshire as a whole.
- Local communities have reported a perceived reduction in safety and a perceived increase in crime or the fear of crime as a result of the introduction of part night street lighting.
- Lincolnshire Police has reported that there are limited connections between the changes in the levels of crime recorded and the introduction of 'part-night' lighting and therefore it cannot be explicitly concluded that there is a relationship between the two.
- Lincolnshire Police have stated that if there was a demonstrable link between crime and part night lighting they would approach the County Council with a view to requesting that the policy was changed
- The perceived impact reported from local residents varies across Lincolnshire with urban areas reporting a greater impact in general.
- All three emergency services have reported minimal noticeable changes in providing key services within Lincolnshire since the introduction of part night lighting.
- The change to part night lighting has resulted in a reported impact to shift workers travelling to/from work in Lincolnshire between the hours of 00:00 and 06:00.
- There are some local concerns in relation to the impact of part night street lighting in areas of holiday/seasonal accommodation and the wider impact on the economy and tourism.
- Overall the change to part night street lighting has contributed to a 50% reduction in energy consumption by street lighting across the County and over 6,200 tonnes of CO2 saved year on year.
- Research on data from 62 Council areas from July 2015 reviewed the effect of reduced street lighting on road casualties and crime in England and Wales from 2010-2013 indicated there was minimal evidence to demonstrate an increase in crime. [1]

[1] Research published in the Journal of Epidemiology and Community Health based on 14 years of data from 62 local authorities across England and Wales (http://jech.bmj.com/content/early/2015/07/08/jech-2015-206012.short?g=w_jech_ahead_tab)

1.2 Recommendations

The following recommendations will be forwarded to the Council's Executive for consideration.

Recommendation 1

That Lincolnshire Police are requested to continue to review and update a street lighting crime data report for consideration by Lincolnshire County Council's Public Protection and Communities Scrutiny Committee on an annual basis.

In addition, the following considerations to be reviewed by Lincolnshire Police for development as part of future reports:

- Where possible, ensure the clear recording of the lighting conditions for when the crime occurred to allow better records of data and to allow a more reflective assessment of specific streets where crimes have occurred and street lighting has been reduced.
- Inclusion of additional crime types highlighted as a key concern for local residents as part of the public engagement activity - sexual offences, burglaries, car and van crime, drug related incidents, muggings, vandalism and anti-social behaviour.

The Scrutiny Panel recommends that crime rates and fears about safety/crime continue to be reviewed over the coming years to monitor the longer term impact of the introduction of part night street lighting. However, the evidence received as part of this review shows little evidence to suggest night time crime has significantly increased.

Recommendation 2

That the Lincolnshire Road Safety Partnership ensures data regarding street lighting levels is captured and reported as part of any analysis of road safety and collisions. And, for this data to be reported and considered by Lincolnshire County Council's Public Protection and Communities Scrutiny Committee on an annual basis.

The Scrutiny Panel recommends the need to continue to monitor accident trends over the coming years to fully understand if part night street lighting does have a meaningful impact, however at this stage no clear link has been identified.

Recommendation 3

That the Executive considers formalising the list of exemption sites as part of the County Council Street Lighting Policy and include an additional exemption for community public access defibrillator sites where requested by local communities.

The Scrutiny Panel has considered additional exemptions highlighted through the public engagement activity and recommends the exemption from part-night lighting of lights in the immediate vicinity of registered community accessible defibrillator sites.

Recommendation 4

That the Executive endorse working between the County Council and other agencies to plan communication activity with the public to reassure and address the cause of fears of crime surrounding the change to part night street lighting. And, to develop an action plan and work to reduce these fears and change public perceptions.

The Scrutiny Panel recommends that additional work is undertaken to review, improve and communicate more effectively with the public to support greater awareness and clarity of the messages in relation to the concerns highlighted around Crime Rates, Fears about Safety and Crime. Lincolnshire remains one of the safest areas in the Country and this needs to be more effectively communicated going forward.

The Scrutiny Panel also recommends that communication with the public needs to take place during the annual changes between British Summertime and Greenwich Mean Time in the spring and autumn adjustment phase and would seek to ensure that more effective communication take place going forward.

Recommendation 5

That the Executive considers the County Council developing an appropriate protocol to enable local communities (through Town/Parish/District Councils) to financially support street lighting to be upgraded to LED and reinstated to full night operation on request as part of routine maintenance.

The Scrutiny Panel recognises that concerns across Lincolnshire are localised and recommends the development of an appropriate protocol to enable local communities to financially support street lighting to be upgraded to LED and reinstated to full night lighting where required and on request as part of routine maintenance.

The Scrutiny Panel does not propose for other authorities to adopt street lights from the County Council, however the option for agreements to be put in place to between the County Council and Town/Parish/District Councils to support local communities restore full night lighting should to be available where there is a genuine local concern.

2. Introduction

2.1 Establishment of the scrutiny review panel

On 27 July 2017, the County Council's Overview and Scrutiny Management Board approved a scrutiny review to ascertain the impact of the part night street lighting policy. Following this the membership of the scrutiny panel was confirmed and discussions involving the respective chairmen and key participants took place to provide detail on the direction of the review.

On 30 November 2017 the Overview and Scrutiny Management Board endorsed the terms of reference for *the 'Impact of the Part Night Street Lighting Policy Scrutiny Review'* as per Article 6.10 of the County Council's Constitution.

The membership of the Scrutiny Panel comprised:

Councillor Angela Newton
(Chairman)
Spalding West

Councillor Stephen Kirk
(Vice-Chairman)
Skegness South

Councillor Graham Cullen
Mablethorpe

Councillor Daniel McNally
Saltfleet and the Cotes

Councillor Paul Skinner
Boston Coastal

Councillor Adam Stokes
Grantham South

Councillor Mark Storer
Ruskington

Councillor Mrs Rosemary
Trollope-Bellew
Deepings West and Rural

2.2 Scope of the review

This review has considered the impact of the change in the Street Lighting Policy to turn street lights off in certain areas between midnight and 6am. The review has considered a number of different areas where there may have been an impact, either positive or negative, as a result of this change and has proposed a number of recommendations based on its findings where improvements could be made.

Main Lines of Enquiry

1. To consider key national and local documents and guidance in relation to the Part Night Street Lighting Policy.
2. To examine the impact of switching off street lights at midnight on different areas such as on the environment; crime rates; fears about safety and crime; emergency services; health and public health services.
3. To consider data and substantiated evidence, such as crime rate figures, accident data, complaint figures, and exemption requests, regarding the impact of the Part Night Street Lighting Policy.
4. To consider the wider economic impact of Part Night Street Lighting on business, including the impact on the night time economy.
5. To invite the views of members of the public, County Councillors, district councils and parish/town councils regarding the perceived impact on crime rates, and fears of crime and safety.
6. To conduct comparisons with other Local Authorities who have also changed their street lighting policy to incorporate part night lighting.
7. To investigate potential savings or cost implications arising from any proposed changes to the Part Night Street Lighting Policy within the allocated budget.

A key aim of this review has been to seek to ensure that the Council's new Street Light Policy in relation to part night lighting is being managed to minimise the adverse impact on the communities in Lincolnshire affected by the changes.

2.3 Exclusions from the review

This review has examined the impact of the Part Night Street Lighting Policy, all other elements of the Street Lighting Policy have been excluded from the review.

2.4 Scrutiny panel timeline

The Scrutiny Panel approved the below timeline in December 2017.

October 2017
Scope the review
- determine the key issues and objectives
- identify key stakeholders
- identify who needs to be involved
- decide what evidence needs to be gathered and how

November, December 2017 and January 2018
Gather evidence
- undertake consultation through questionnaire
- source data and reports
- interview experts and witnesses
- work with officers and councillors to research issues

February / March 2018
Evaluate evidence
- consider all the evidence in the context of the scope of the review
- look at evidence alongside other sources of data to gain a comprehensive view of the performance of a given service

March / April 2018
Report and make recommendations
- document the work carried out and what conclusions have been reached
- make recommendations

26 April 2018
- present the report and recommendations to the Overview and Scrutiny Management Board for approval

5 June 2018
- present the final report and recommendations to the Executive

Late 2018
Implementation by the Executive / officers
- agree and develop an implementation plan
- action the agreed recommendations
- feedback outcomes to stakeholders, including the local community

3. Background

The County Council provides around 68,000 street lights which primarily light the public highway. In addition there are around 14,500 street lights which are owned by district, town and parish councils in Lincolnshire.

Due to ongoing constraints on revenue budgets across the County Council, the possibility of savings from changes to the street lighting service started being explored in depth during 2015. In order to assist in delivering savings, a capital investment of £6.4m was approved in January 2016 from the County Council's Future Capital Development Contingency

The Street Lighting Transformation Project was developed in parallel with the identification of the capital investment and was based on alterations to the street lighting policy to allow changes to be implemented.

3.1 Street lighting transformation project

The Street Lighting Transformation Project was implemented from April 2016 and used capital investment alongside normal budgets to implement the hierarchy of provision as detailed in the street lighting policy. This resulted in three main strands to the project within the constraints of the budget:

- Conversion to LED (dimmed at times of low use) of just over 17,000 higher wattage lights on mainly trafficked routes
- Complete switch off of 870 higher wattage lights on mainly trafficked routes
- Conversion to part night lighting of just less than 44,000 lights, with otherwise eligible lights being left on as they met defined exemption criteria

The project was substantially completed within the 2016/17 financial year. Some works continued into the 2017/18 financial year, including conversion to part night LED of lights which require scaffolding for access and conversion to LED of heritage-style lights which require specific design work and equipment with long order times.

In preparation for and during the implementation of the Transformation Project specific communications were undertaken through a range of proactive and reactive means. These were in addition to the fact that all the Scrutiny and Decision papers referred to above are publicly available.

Two editions of County News (which is delivered to every household in the county) carried articles on the Project, including details of the changes and where to find further information. This included a page on the County Council's website, accessible via www.lincolnshire.gov.uk/streetlighting.

A number of press releases combined with social media articles were published by the Council's communications team. The changes and project were picked up extensively by the local media, resulting in a number of articles in local newspapers, and items and interviews on local radio and television.

3.2 National legislation

The law about street lighting is set out in section 97 of the Highways Act 1980 which is set out below:

Highways Act 1980 – Section 97

"Section 97 — Lighting of highways.

1) *The Minister and every local highway authority may provide lighting for the purposes of any highway or proposed highway for which they are or will be the highway authority, and may for that purpose—*
    a) *contract with any persons for the supply of gas, electricity or other means of lighting; and*
    b) *construct and maintain such lamps, posts and other works as they consider necessary.*

2) *A highway authority may alter or remove any works constructed by them under this section or vested in them under Part III of the Local Government Act 1966 or section 270 below.*

3) *A highway authority shall pay compensation to any person who sustains damage by reason of the execution of works under this section.*

4) *Section 45 of the Public Health Act 1961 (attachment of street lamps to buildings) and section 81 of that Act (summary recovery of damages for negligence) apply to a highway authority who are not a council of a kind therein mentioned as they apply to such a council."* [2]

The law states that:

- The Highways Act empowers local authorities to light roads but does not place a duty to do so
- The council has a duty of care to road users but only has an obligation to light obstructions on the highway
- The council has a statutory duty under the Highways Act to ensure the safety of the highway and this includes the safety of any lighting equipment placed on the highway
- The Electricity at Work Regulations imposes a duty on owners and operators of electrical equipment to ensure its safety.

Where lighting is provided its purpose is to improve the safety of the highway, based on traffic volumes and levels of use. An exception to this is that road humps constructed in accordance with Road Hump Regulations do require lighting. [3]

[2] Highways Act 1980 – Section 97 (https://www.legislation.gov.uk/ukpga/1980/66/section/97)
[3] The Highways (Road Humps) Regulations 1999 (Regulation 5)
http://www.legislation.gov.uk/uksi/1999/1025/regulation/5/made

3.3 Part night lighting

The times at which lights are switched off in Lincolnshire are from around midnight until 6am, if light levels require it. The timing is governed by intelligent photo-cells which, on installation, assess the length of the night and whether it is getting longer or shorter to see what time of year it is, and then adjusting its timings accordingly. These sensors therefore also have an adjustment period around the time that the clocks change, and maybe affected if there is a power cut.

In addition, part night lighting has been applied to new development roads within Lincolnshire since 2010, before being introduced more widely as part of the transformation project.

A policy decision was taken by the Executive Councillor for Highways, Transport and IT in March 2016 to amend the Street Lighting Policy. The amendments updated the hierarchy to be worked through for existing street lights wherever practicable to be as follows:

1) Complete removal of lights (subject to a lighting assessment and local engagement) where this is the most financially sustainable solution considering removal costs.
2) Turning lights off (subject to a lighting assessment)
3) Part night lighting (Dusk to 2400 then 0600 to Dawn)
4) Dimming lights
5) As a last resort, leaving lights fully lit during normal lighting hours.

This decision included a section on implementation of the policy, which whilst not part of the policy includes principles regarding how it should be applied. In relation to the application of part-night lighting it proposed that existing lights be converted to part-night lighting as part of the Street Lighting Transformation Project. In residential and commercial areas, this would be where columns are 6m tall or less. On industrial estates, all columns would be part-night lit.

3.4 Exemption sites

The revised policy introduce in 2016 set out in principle that a location with any of the following characteristics could be considered for an exemption in determining the final application of the policy relating to part-night lighting:

- A significant record of night-time road traffic accidents, as advised by the Lincolnshire Road Safety Partnership
- A significant record of night-time crime, as advised by the Police or Community Safety Partnership
- An adjoining care / nursing home, sheltered housing, or warden controlled accommodation
- An operational emergency service facility, including Fire, Ambulance, Police, Coast Guard, or Hospital with 24 hour A&E
- A highway safety feature, such as traffic calming, speed humps, zebra crossings etc.

- A significant night time economy, defined as the centre of a major urban area or larger town as referred to in the County Council's Local Transport Plan 4
- Permanent Local Authority or Police CCTV surveillance equipment
- A footpath and/or cycleway that links to two separate roads that are lit all night

3.5 Other considerations

Central Management System (CMS)

Authorities that have introduced a CMS are able to relatively quickly and cheaply reverse any part-night operation. However, the initial investment for a CMS and the annual running charges are significant across a large lighting stock such as in Lincolnshire.

LED lighting options

The extra over cost of conversion (of the lower powered lamps that have generally been converted to part night operation) to an LED lamp rather than re-lamping the existing light is approximately £120 per unit, if carried out as part of the routine maintenance visit. The payback period would be approximately 10 years.

Where reversal is combined with the introduction of LED lighting and dimming, energy savings can be maintained, although the initial investment to do this is significant across a large lighting stock.

If all the part-night lights had been converted to LED as part of the Transformation project, then the additional cost of the project would have been in the order of £5.5M.

4. Other local authorities part night lighting arrangements

A national research project in October 2014 identified that 48% of lighting authorities that responded had instigated some part-night lighting. As part of the Scrutiny Review the experience of other authorities was canvassed as part of the review through established contacts and professional technical groups. This information was discussed at a meeting of the Scrutiny Panel on 24 January 2018.

Cambridgeshire

In April 2016, Cambridgeshire commenced conversion to part-night any of its 58,000 streetlights that are in residential areas. However, by December 2016 the Council had voted to reverse this. There was no empirical data to suggest that crime or accidents had risen and the timescale in which the decision was reversed would not have allowed relevant data to be gathered. This decision appears to have been made based on perception, with complaints from elderly people and shift workers being cited in the debate.

During the brief time that part-night lighting was in place, Cambridgeshire operated a policy whereby parishes or District Councils could pay for lights to remain on all night; Cambridge City Council paid to keep all lights on within the City Boundary from the start.

It is worth noting that Cambridgeshire operate a Central Management System (CMS), meaning that changes can be implemented cheaply and quickly.

Nottinghamshire

Nottinghamshire started introducing part-night lighting in 2010 but, despite having consulted on this in advance, found that they received many complaints and petitions as it was rolled out. A change in administration in 2013 resulted in the reversal of the policy and Nottinghamshire have decided to replace all lighting stock with LEDs, dimmed during the early hours.

Nottinghamshire does not have a CMS, so they would have incurred significant costs in implementing this reversal.

Derbyshire

Derbyshire has limited part-night lighting, with around 8000 out of 90,000 lights converted between 2012 and 2015. This has reduced to around 7355, with those that have been reversed being done so through discussion with the Community Safety Team. In addition, when the fittings on part-night lights were converted to LED, they were also returned to being on all night; this is no longer the case so that part-night lights remain as such when changed to LED.

The feedback from officers is that residents who experience a theft tend to attribute this to part- night lighting rather than their own security provisions and that it is fear of crime rather than actual data which has led to reversals.

Derbyshire does not have a CMS, so there is a cost in reversing any part-night operated lights.

Leicestershire

Since 2010 almost 55% of Leicestershire's 68,000 lights have been converted to part-night operation. By the end of the current financial year all lights within Leicestershire will also be LED and controlled through a CMS; however, part-night lighting will be retained where it has been implemented.

The only reversals of part-night lighting in Leicestershire have been done in conjunction with the police, mainly in response to specific spates of crime. One such area saw an increase in vandalism to cars, perceived as being due to part-night lighting. However, another area had experienced a burglary spree for two weeks prior to the introduction of part-night lighting, which continued after its introduction, resulting in selective reversal in the area.

The most significant area for partial reversal is the Oadby suburb of Leicester with around 23,000 inhabitants. They had experienced a spate of at least 27 break-ins over a matter of weeks in autumn 2017. Utilising the CMS, the Police asked for the street lights to be turned back on across Oadby until the end of January 2018 after which the situation is due to be reviewed with the possibility of reverting to part-night lighting. It is worth noting that additional crime-reduction measures have also been taken such as increasing police patrols.

Warwickshire

Warwickshire has roughly 50,000 street lights with part-night operation currently on 32,166. This phased operation began in December 2012, and has been implemented through a CMS.

The Principal Lighting Engineer has confirmed that there have been no reversals other than those which were overlooked as meeting the exception criteria for the project. Complaints regarding part night lighting are now at a low level indicating that part-night lighting has largely been accepted within the County.

North East Lincolnshire and North Lincolnshire

Neither of our neighbours to the north appears to have implemented any part-night lighting at this stage, although both have installed or are in the process of installing LED replacements to the majority of their stock. However, we have had enquiries from them about how we managed the implementation of part-night lighting, indicating that they are giving it some consideration.

Norfolk County Council

Norfolk has implemented a large scale part-night lighting programme on a large percentage of their 53,000 street lights. This has been implemented it in full consultation with Norfolk Police and any reversals are required to be agreed and instigated by the Police.

To date, they have temporarily reversed a handful of lights using their CMS. This has been in response to specific incidents whilst the Police have undertaken inquiries. All of these have returned to being part-night operated following the completion of the Police investigations. To date therefore there have been no permanent reversals due to crime or other incidents.

Kent County Council

Kent is one of the largest lighting authorities in the UK with 118,000 street lights. In 2014 60,000 of these were converted to part-night operation. Subsequently, a consultation process was instigated which included workshops, focus groups and a public survey. As a result it was decided in February 2016 that the savings to be made by installing LEDs and dimming could allow the restoration of all night lighting as and when the LEDs are installed, which is to be over a 14 month period.

The Authority recently awarded a 15 year contract whereby all street lights will be converted to LED and a CMS installed. It should be noted that there is no information to suggest that this reversal was in any way linked to an actual increase in crime but as a response to the consultation.

5. Engagement during the review

From the start of the review, the Scrutiny Panel agreed that a key priority was to engage and listen directly to the people who live and work in Lincolnshire. This section covers the engagement tools which were used to seek, receive and consider the views of key stakeholders in Lincolnshire.

In undertaking this review it was agreed to develop a survey to invite views from members of the public to be considered as part the Scrutiny Review process. The survey was launched on 17 November 2017 and was made available on the County Council's website until the 05 January 2018. The survey asked a number of questions to ascertain the impact of the change, both positive and negative and also allowed for feedback on any other exemptions that could be considered by the scrutiny panel.

The survey was widely publicised in local media; two news releases were issued to promote the survey (on 17 November and 20 December) which resulted in 26 items in the local media. Both releases were also posted on the LCC website, the first release was viewed 1,939 times and the second 411 times.

The survey was also promoted via County News, which was delivered to around 350,000 homes and businesses across the county at the end of November. In addition, it was advertised and shared through the council's social media accounts.

The Scrutiny Panel wishes to record its appreciation for the excellent response to the survey, with 5305 responses being received. This level of response confirmed that engagement with the public was an essential element of the review.

The Scrutiny Panel also distributed a letter to local communities to promote engagement with the Scrutiny Review process and highlight the various methods of engagement. This included -

- 70 County Councillors
- 285 District Councillors
- 54 Parish / Town Councils sent a written letter
- 351 Parish / Town Councils sent an email letter
- 7 District Councils

The Scrutiny Panel also wrote to all Lincolnshire MP's as part of the process to seek any additional evidence for the review –

- Victoria Atkins (Louth and Horncastle), Nicholas Boles (Grantham and Stamford), John Hayes (South Holland and The Deepings), Dr Caroline Johnson (Sleaford and North Hykeham), Karen Lee (Lincoln), Sir Edward Leigh (Gainsborough), Matt Warman (Boston and Skegness).

In addition, the Scrutiny Panel contacted local Emergency Services to seek their views on the impact on the services they provide -

- Lincolnshire Police
- Lincolnshire Fire and Rescue
- East Midlands Ambulance Service (EMAS)

6. Analysis

The Scrutiny Panel heard a range of evidence throughout the review in order to form a better understanding of the matters relating to the impact of the change to part night street lighting. This section covers the evidence considered by the panel.

6.1 Public Engagement Survey

The public engagement undertaken asked respondents for partial details of their postcode. Of the 5,305 respondents, 43% gave their full postcode and the rest gave a partial or no postcode. At least 80% of the results were mapped to a district level and only 50% to a more detailed location.

Results by location

Lincoln and West Lindsey had the highest response rate (over 7 people per 1,000 population), while the lowest response rate was in South Holland (just under 4 people per 1,000 population). The overall Lincolnshire average was 5.5 people per 1,000 population.

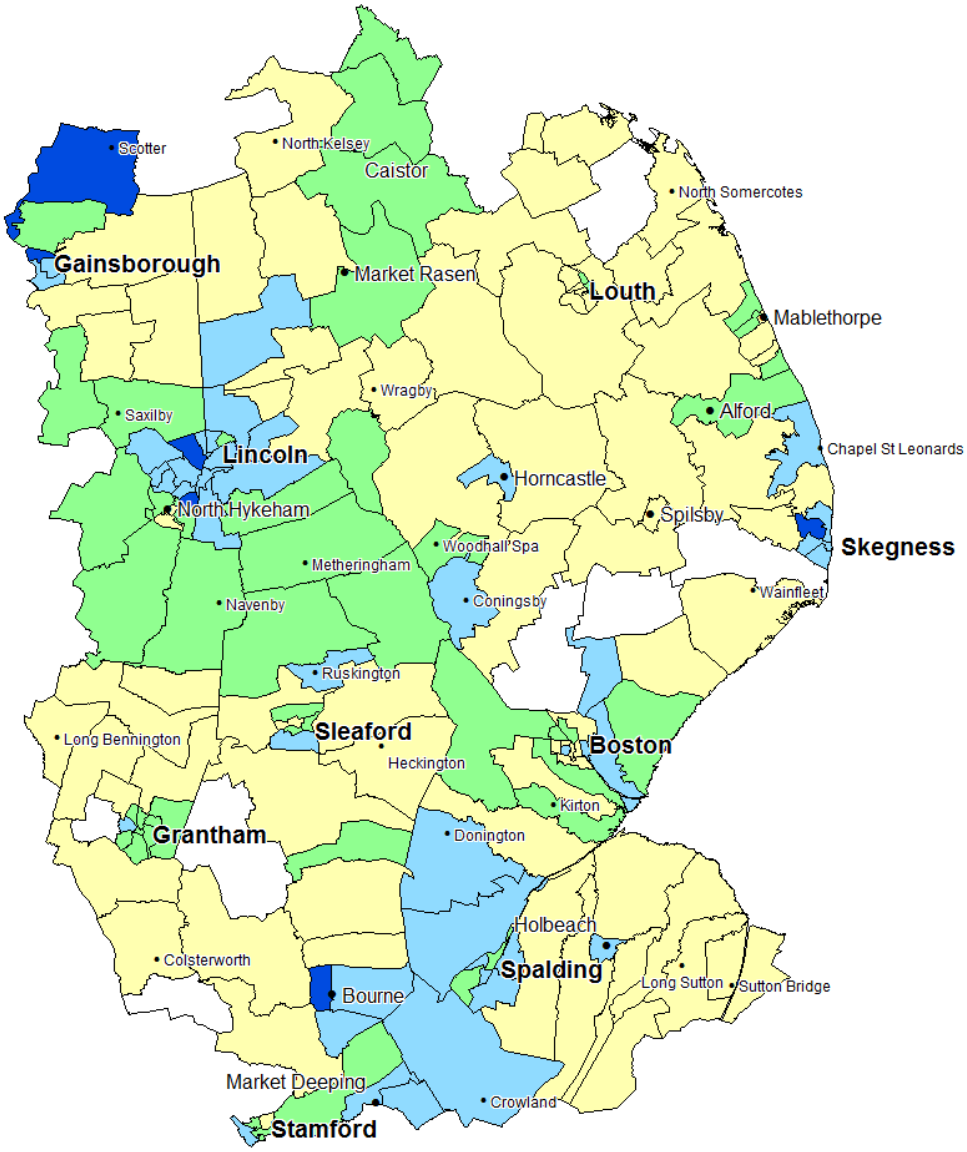
Local authority	Number of responses	% of all responses	Response rate per 1,000 pop
Boston	341	6.4%	5.05
East Lindsey	826	15.6%	5.97
Lincoln	687	13.0%	7.02
North Kesteven	521	9.8%	4.60
South Holland	368	6.9%	3.98
South Kesteven	687	13.0%	4.90
West Lindsey	684	12.9%	7.30
Unmatched postcodes	1,191	22.5%	N/A
All Lincolnshire matched postcodes	4,114	77.5%	5.53
All survey responses	**5,305**	**100.0%**	**N/A**

The survey results indicate a variation between local authority districts in their feedback about the street lighting changes. Boston had a significantly higher negative response rate than the other districts, while North Kesteven had a significantly lower negative response rate than the other districts.

Local authority	Negative and extremely negative	No impact	Positive and extremely positive
Boston	83.9%	7.6%	8.5%
East Lindsey	74.2%	12.2%	13.6%
Lincoln	75.0%	10.8%	14.3%
North Kesteven	59.7%	24.0%	16.3%
South Holland	75.0%	15.5%	9.5%
South Kesteven	72.8%	12.7%	14.6%
West Lindsey	72.8%	12.7%	14.5%
Unmatched postcodes	78.5%	11.6%	9.9%
All responses	**74.2%**	**13.1%**	**12.7%**

Survey responses matched to 2011 district council wards

The raw number of survey responses matched to each 2011 district council ward



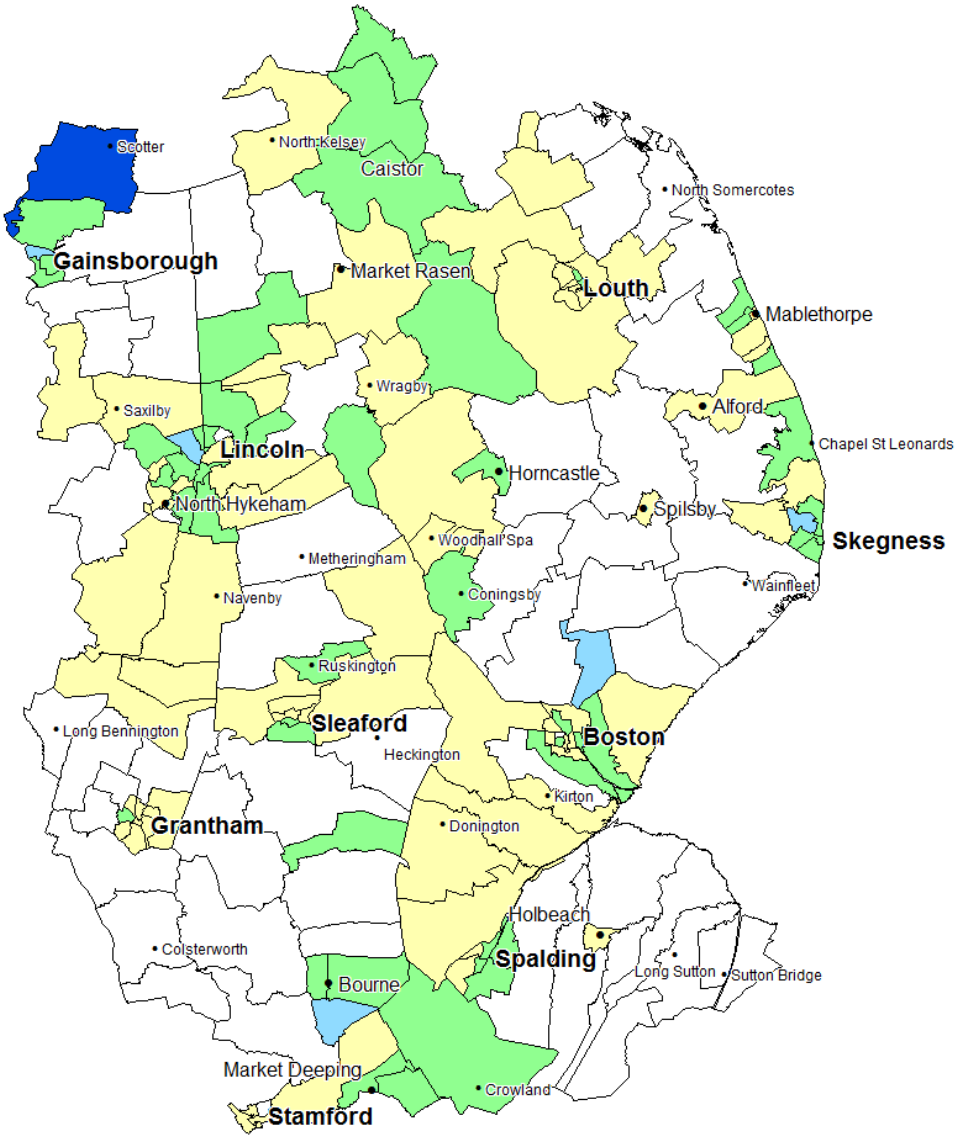
Map Legend: White = no matched responses; Yellow = 1-9 matched responses; Green = 10-19 matched responses; Light blue = 20 to 49 matched responses; Dark blue = 50+ matched responses

The following wards had 50 or more matched survey responses: Carholme (Lincoln) 164 matched responses, Scotter (West Lindsey) 113 matched responses, Gainsborough North (West Lindsey) 82 matched responses, St Clement's (Skegness, East Lindsey) 66 matched responses, Bracebridge (Lincoln) 54 matched responses, Bourne West (South Kesteven) 53 matched responses.

<u>Survey responses expressed as a rate per 1,000 resident population</u>

The number of survey responses matched to each 2011 district council ward expressed as a rate per 1,000 resident population.

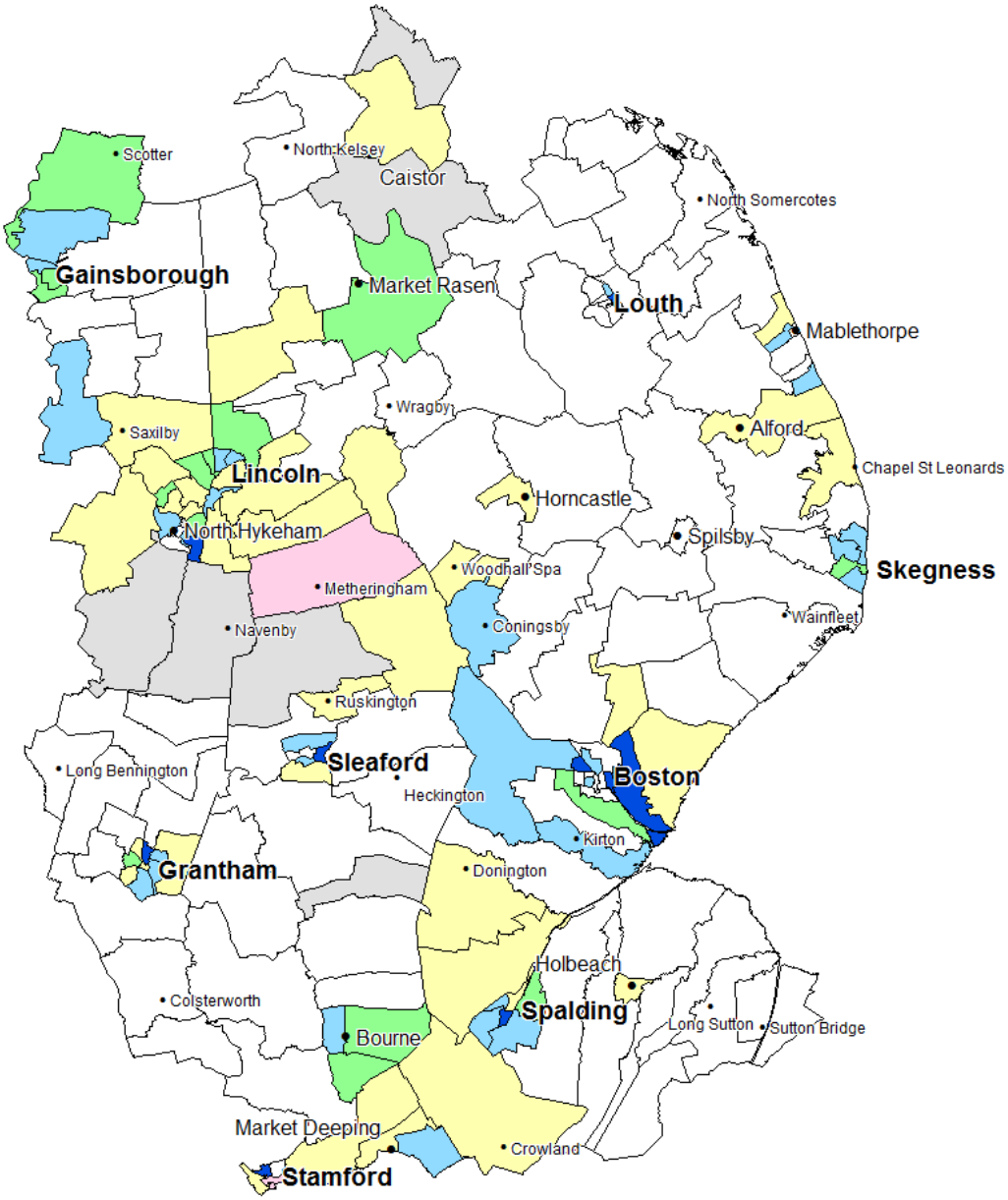
The average response rate for those survey responses that could be mapped to a 2011 district ward was 4 per 1,000 resident population. This means that any ward shaded in green, light blue or dark blue has an above average response rate.



Map Legend:
White = response rate of less than 2 per 1,000 resident population
Yellow = response rate of between 2 and 3.9 per 1,000 resident population
Green = response rate of between 4 and 9.9 per 1,000 resident population
Light blue = response rate of between 10 and 14.9 per 1,000 resident population
Dark blue = response rate of more than 15 per 1,000 resident population

<u>Responses which indicated a negative or extremely negative impact</u>

The proportion of responses that stated that the street lighting changes had a negative or extremely negative impact. Only those wards with at least 10 responses matched to them have been mapped.



Map Legend:
White = fewer than 10 matched responses
Pink = fewer than 25% of respondents stated there was a negative impact
Grey = between 25% and 49.9% of respondents stated there was a negative impact
Yellow = between 50% and 72.9% of respondents stated there was a negative impact
Green = between 73% and 79.9% of respondents stated there was a negative impact
Light blue = between 80% and 89.9% of respondents stated there was a negative impact
Dark blue = over 90% of respondents stated there was a negative impact

The average proportion of matched respondents who stated there was a negative impact from street lighting changes was 73%. This means that any ward shaded in green, light blue or dark blue has an above average response rate for negative impact. Wards shaded pink and grey are those where fewer than half of the responses were negative.

Those wards with the highest and lowest negative response rates are as follows:

2011 ward	All matched responses	% responses that were negative
Skirbeck, Boston	41	95.1%
Spalding St John's, South Holland	30	93.3%
St Wulfram's, South Kesteven (Grantham)	15	93.3%
All Saints, South Kesteven (Stamford)	14	92.9%
Fishtoft, Boston	26	92.3%
Trinity, East Lindsey (Louth)	13	92.3%
Fenside, Boston	11	90.9%
Waddington West, North Kesteven	11	90.9%
Sleaford Navigation, North Kesteven	10	90.0%
St Mary's, South Kesteven (Stamford)	13	15.4%
Metheringham, North Kesteven	10	10.0%

Response free text which highlighted a work based impact

More than a quarter of the responses by those who indicated that the street lighting changes had been negative or extremely negative explicitly mentioned work. This rose to more than 1 in 3 such respondents in Boston and South Holland.

Local authority	% negative or extremely negative respondents who explicitly mentioned work
Boston	35.3%
East Lindsey	27.2%
Lincoln	23.7%
North Kesteven	30.5%
South Holland	36.2%
South Kesteven	26.8%

West Lindsey	26.7%
Unmatched postcodes	27.1%
All survey responses	**28.1%**

Results by age range

Below are the results broken down by age range and response to the street lighting changes. It would appear that there is a generational divide. 4 out of 5 of those under 54 have a negative response to the change. This drops to 1 in 2 for the 75-84 group. In other words, while this change is negatively affecting more than half of respondents belonging to all age groups, it is those of working age who report being most negatively affected.

Age range	Number of respondents	Negative and extremely negative	No impact	Positive and extremely positive
15 and under	5	100.0%	0.0%	0.0%
16-19	76	80.3%	5.3%	14.5%
20-24	248	80.6%	9.7%	9.7%
25-34	737	82.1%	11.5%	6.4%
35-44	936	80.3%	10.1%	9.5%
45-54	1,249	78.1%	11.8%	10.1%
55-64	1,071	67.6%	16.6%	15.8%
65-74	734	61.0%	16.6%	22.3%
75-84	136	53.7%	23.5%	22.8%
85 and over	15	60.0%	13.3%	26.7%
Undisclosed	98	83.7%	11.2%	5.1%

6.2 Additional Exemption Sites

The survey set out the current exemptions where part night lighting has not be implemented, and asked those completing the survey if any other exemptions should be included. The following general areas were highlighted as part of the survey response:

- Unguarded river banks
- Near schools
- High speed roads with no cats-eyes/road studs
- Coastal areas
- Outside of railway stations
- Areas of shift working
- Public transport points
- Defibrillator site
- University campus
- Flood risk areas
- Areas of high older population

In addition, the survey indicated that greater consideration should be given to local groups, businesses or residents who strongly petition for the need for their localised street lighting to remain on.

6.3 Lincolnshire Police

Lincolnshire Police released their initial findings into the effect of the introduction of part-night street lighting in an independent report on 27 November 2017. The Scrutiny Panel received a full briefing on the findings at its meeting on 6th December 2017.

The initial findings were that the Police could find no evidence to suggest that part-night street lighting had caused an increase in overnight crime. Crimes considered in the report included burglaries, Theft from person and personal robbery, vehicle offences and cases of criminal damage in the areas affected by the changes.

Their report compared crime levels from before the introduction of part-night lighting to now that street lights have been switched off between the hours of midnight and 6am. The Panel noted that there had been an increase in some of these overnight crime types (Criminal Damage) and that overall crime in Lincolnshire had also increased, as it has nationally. Overall crime was reported as up by 4% in Lincolnshire where the national average stands at an 11% rise.

The data used for this report was for offences of burglary, criminal damage, vehicle and violence against the person/personal robbery, which were recorded as occurring between 0000 - 0600 hours, to align with the approximate hours that street lighting has been turned off.

The Police report concluded the following –

"Overall, when looking at this data, it is not possible to conclude whether the changes over the two time periods at each geographical level within Lincolnshire are the result of implementing 'part-night' lighting.

There are peaks within the data, both on a slight and more substantial scale, which can, on occasion be accounted for by a series of crimes. This is not always the case and there are instances where a cause for the increase or reduction in data cannot be explained.

The variations in the data for areas or specific beat codes lack consistency in the direction of change, for example an increase occurred for burglary offences yet vehicle crimes reduced. In order to conclude that crime levels have been affected by the implementation of 'part-night' street lighting, a consistent pattern in terms of direction and scale of the changes would be expected amongst the data. Due to this lack of uniformity across crime type in terms of the change, it is not possible to distinctly conclude that street lighting has an impact upon the levels of crime." [4]

[4] Page 35 - Lincolnshire County Council Street Lighting Transformation Project and Lincolnshire Police crime rates report (Version 2) November 2017

The scrutiny panel considered a number of recommendations from Lincolnshire Police included as part of the report

- A review/replication of this report when a full year of data is available for all areas across Lincolnshire to ensure data is more geographical aligned with the council areas.
- Better reporting to reflect the lighting conditions for when the crime occurred. If use of this field can be encouraged it will provide better records of data and allow a more reflective assessment of specific streets where crimes have occurred and street lighting has been turned off.
- Ensure continued communication with the public to address the perception of fear of crime.

6.4 Lincolnshire Road Safety Partnership

The Scrutiny Panel received an update from Graeme Butler from the Lincolnshire Road Safety Partnership (LRSP) on 3 November 2017. The LRSP is a data led organisation in terms of accident reporting, and works very closely with Lincolnshire Police.

The LRSP indicated that there had not been enough time to gather statistics relating to street lighting. However, the Police collected all data at the site of any injury accident, including information relating to street lighting, such as whether there was:

- Daylight
- Darkness with street lights lit
- Darkness with street lights not lit

LRSP confirmed that some useable data may be available in 2018, but the panel considered that the time since the implementation of part night lighting means it is still very early to make any meaningful comparisons in relation to Road Safety.

6.5 The Safer Lincolnshire Partnership

The Scrutiny Panel received an update from Sara Barry, Safer Communities Manager on 3 November 2017. The role of the Safer Communities team is to ensure that the County Council addressed its duties in relation to crime and disorder in relation to the prevention of crime and addressing the fear of crime.

Prior to the start of the Street Lighting Transformation Project, the Safer Communities team were asked to highlight the high crime areas in the county, and it had been difficult to identify these areas in Lincolnshire, as it was generally a safe county. However, the team was able to provide data on a detailed basis to the Street Lighting Team. Some research of the situation nationally was also carried out for those areas where street lights had been turned off, this research showed that in a lot of cases crime had fallen, however, there was no data regarding the fear of crime.

It was the intention to carry out some research once the lights had been changed for some time to examine how crime patterns had changed.

The responsibility of the Safer Lincolnshire Partnership is to engage with the community to understand the issues which were concerning them. Some research was carried out working with the PCC, and of 858 responses, only 14 mentioned street lighting as a problem or a fear of safety in their locality.

6.6 Lincolnshire Fire and Rescue (LFR)

The Scrutiny Panel received a briefing from John Cook, Assistant Chief Fire Officer on 24 January 2018 to discuss any perceived impacts on Lincolnshire Fire and Rescue due to the introduction Part Night Street Lighting policy.

It was reported that there had been a number of cases where issues had been raised by fire fighters who felt that no street lighting had made it more hazardous when responding to calls and travelling from home. Some of the issues included dark streets and not being able to see parked cars or other obstacles. From a Fire Service perspective, it was highlighted that staff were well supported to deal with responding to incidents.

Lincolnshire Fire and Rescue (LFR) indicated that overall there had been no negative impact on the service, as all fire engines were fitted with mast lights, torches and all firefighters helmets had LED lights installed. It was still believed that this was the case in relation to service activities.

6.7 East Midlands Ambulance Service (EMAS)

A response from East Midlands Ambulance Service (EMAS) was received on the 5 March 2018. EMAS reported that they had undertaken a review of untoward incident reports and undertaken discussions with staff. To the best of knowledge EMAS were not aware of any detriment to responding or associated incidents. EMAS reported that staff and vehicles in the rurality of Lincolnshire are accustomed to attending address's with limited street light availability.

EMAS reported that regardless of lighting conditions the key issue commonly faced was the identification of house names or numbers from a roadside position. Further to this, EMAS suggested that any communications highlight the need for either outside lights or boundary/driveway house names or numbers that are clearly visible would be highly beneficial in responding to emergency calls.

6.8 Members of Parliament (MPs)

<u>John Hayes CBE MP (South Holland and The Deepings)</u>

A petition signed by residents of Spalding calling for Street Lighting to be turned on in residential areas was forwarded for consideration as part of the review. The residents also suggested that maybe alternative street lights could be left on.

Karen Lee MP (Lincoln)

'First of all, I regularly undertake doorstep surgeries with a number of local City of Lincoln Councillors. Complaints about the streets being in complete darkness late at nights are an issue which is raised every single time I undertake this kind of surgery. I accompanied Cllr Jane Loffhagen last Saturday in the Brant Rd area of Lincoln and I received a substantial number of complaints about the lack of proper street lighting. I've also been out in the Hykeham Rd and Ermine/ Cathedral area. It is my understanding that complaints to City Councillors are passed on to elected members of the County Council following such surgeries and that County Councillors have been made aware.

The concerns raised are around personal safety, i.e. the fear of being attacked in the dark, as well as falling or tripping in the darkness. People are worried about vandalism to cars and other property in the dark. People have said to me that they no longer go out at night because of the lights being switched off so that clearly does have an impact on the local business economy as well as causing social isolation. People say they are disappointed at the fact that they pay for local services such as street lighting and they feel they are being short changed.

On a personal level I would echo those comments. I live in Lincoln and the lack of lighting is something which concerns me when I am out late at night. The above issues, i.e. being attacked in the dark, falling or tripping over bother me and I am concerned about the possible implications with regard to the selling of drugs by people locally who know their activities cannot be seen in the dark.'

6.9 City of Lincoln Council

A submission from City of Lincoln Council was received on 21 December 2017 from Francesca Bell, Anti-Social Behaviour and Licensing Service Manager. The response indicated that following engagement with staff and elected members the following points were highlighted for consideration as part of the review:

From Paul Carrick – Neighbourhood Manager:

> *'In my experience of working with residents in the Central area of Lincoln, I would strongly suggest that turning off the street lights has had a huge impact on the fear of crime in these areas. Concerns over safety have also been reported to me. Pavements, particularly in the Sincil Bank area can be difficult to navigate due to cars parked on the pavements and bins left out on the streets'*

City of Lincoln Council also informed the Scrutiny Panel that their own data regarding levels of anti-social behaviour (ASB) from the 1 April 2016 to 31 March 2017 (street lighting reduced) had indicated an overall decrease of ASB by 18% and that this was in line with the trend over the last 4 years.

The response concluded that whilst data held by the City Council didn't suggest there has been an increase in crime, partner agencies working with communities had reported that fear of crime and ASB had risen. Fear of crime and ASB is a particular

issue for those who are elderly or vulnerable. The impact of this often leads to further isolation from communities and can exacerbate existing conditions particularly relating to mental health and acts as a barrier to seeking help and support.[5]

6.10 Town and Parish Councils

Town and Parish Councils responded formally as part of the engagement activity and consulted with residents regarding the impact of the introduction of part night street lighting.

- Highlighting specific areas where lights should be reinstated

6.11 Other Public Feedback

A range of other public feedback was received during the survey period which included both written and e-mail submissions.

- Requests for specific lights to be reinstated
- Highlighting specific trip hazards or reporting slips, trips or falls
- ePetitions on 'Intelligent Street Lighting' and 'Turn Street Lights back on'

[5] City of Lincoln Council response to Impact of the Part Night Lighting Policy Scrutiny Review 21/12/2017

7. Outcomes and recommendations

When considering the evidence and comments received as part of the engagement process the Scrutiny Panel found that as well as collecting statistical data, the evidence collecting and public engagement provided the opportunity to collect more detailed information through direct feedback and engagement. Information provided throughout the process has been used to identify a number of 'key themes'. These are:

- **Crime Rates, Fears about Safety and Crime**
- **Road Safety and Collisions**
- **Impact on Emergency Services**
- **Social Impact and Personal Safety**
- **Economy & Employment**
- **Environmental Impact**
- **Public/Community Engagement**
- **Technical Considerations**

The Scrutiny Panel considered these themes when reviewing the evidence and considering recommendations.

7.1 Crime Rates, Fears about Safety and Crime

The survey responses indicated a perceived reduction in safety and a perceived increase in actual crime or the fear of crime as a result of the introduction of part night street lighting. This is linked to the perception that crime rates have increased across Lincolnshire and that street lighting prevents crime.

Areas of crime and fears of crime indicated from the survey included:

- sexual assaults
- burglaries
- car and van crime
- drug use
- fear of mugging
- vandalism
- anti-social behaviour

A number of responses also indicated a substantial perceived increase in crime along the Lincolnshire coast since the introduction of part night lighting.

The Scrutiny Panel acknowledges that fears about public safety and crime levels were a key theme highlighted throughout the review and it is recommended that crime rates and fears about safety/crime are continued to be reviewed over the coming years to monitor the longer term impact of the introduction of part night street lighting. However, the evidence received as part of this review shows little evidence to suggest night time crime has significantly increased.

The Scrutiny Panel supports continued regular engagement between Lincolnshire Police, the Safer Lincolnshire Partnership and the County Council Street Lighting Team to ensure that where there is a significant increase in recorded night-time crime in the future, lighting levels are appropriately reviewed. This should support the

work of the Safer Lincolnshire Partnership, Lincolnshire Police and Police and Crime Commissioner.

Recommendation 1

That Lincolnshire Police are requested to continue to review and update a street lighting crime data report for consideration by Lincolnshire County Council's Public Protection and Communities Scrutiny Committee on an annual basis.

In addition, the following considerations to be reviewed by Lincolnshire Police for development as part of future reports:

- Where possible, ensure the clear recording of the lighting conditions for when the crime occurred to allow better records of data and to allow a more reflective assessment of specific streets where crimes have occurred and street lighting has been reduced.
- Inclusion of additional crime types highlighted as a key concern for local residents as part of the public engagement activity - sexual offences, burglaries, car and van crime, drug related incidents, muggings, vandalism and anti-social behaviour.

7.2 Road Safety and Collisions

The engagement activity indicated a perception that there has been an increase in car accidents and road collisions since the introduction of part night street lighting. There has also been a reported perceived reduction in visibility/poor driving conditions in areas where the lights switch off at midnight and that drivers are experiencing difficulty in seeing parked cars in built up areas.

There was also an indication from survey responses that there is a need for reflective road studs on main routes where lighting has been removed or is now part night lit; and that drivers are experiencing difficulties with visibility of parked cars in built up areas.

The survey responses also indicate the following: -

- road markings are difficult to see in unlit areas
- that main junctions need to be reviewed due to safety concerns
- That cyclists and pedestrians are not wearing reflective clothing where lights are part night lit resulting in dangerous conditions.

The Scrutiny Panel recognises that road safety continues to be a key priority area within Lincolnshire. The Lincolnshire Road Safety Partnership is a data rich organisation in terms of accident reporting and works closely with Lincolnshire Police. The scrutiny panel acknowledges that at this point there has not been sufficient time to gather sufficient statistics to make any comparisons or identify any meaningful impacts resulting from the change to part night street lighting.

The Scrutiny Panel also notes that the Police collect data at the site of any injury accident, including information relating to street lighting. While the police may record at an accident that it occurred in darkness, this does not mean that darkness was the cause of the accident.

The Scrutiny Panel has also considered that lighting levels on key routes, including major roads and key junctions remains unchanged as part of the introduction of part night lighting with around 41% of LCC's street lights remaining lit throughout the night. The Scrutiny Panel have noted that as a rural area there are significant areas of the county's highway network, including many residential areas, where there is no LCC street lighting at all.

The Scrutiny Panel supports the need to continue to monitor accident trends over the coming years to fully understand if part night street lighting does have a meaningful impact, however at this stage no clear has been identified.

Recommendation 2

That the Lincolnshire Road Safety Partnership ensures data regarding street lighting levels is captured and reported as part of any analysis of road safety and collisions. And, for this data to be reported and considered by Lincolnshire County Council's Public Protection and Communities Scrutiny Committee on an annual basis.

7.3 Impact on Emergency Services

The scrutiny panel engagement indicates that there has been a perceived reduction in the emergency services ability to respond to emergencies in areas where part night lighting has been introduced. This was reported to be in part due to crews encountering problems locating addresses and houses after midnight in those areas where part night lighting has been introduced.

The Scrutiny Panel acknowledges public perception that emergency services ability to respond has been impacted in areas where part night lighting has been introduced. There have also been reports of individual Police, Fire and EMAS officers in communities highlighting local concerns.

The Scrutiny Panel recognises that as part of this review none of the command and control bodies of the three emergency services in Lincolnshire have indicated a significant impact from the introduction of part night street lighting.

In addition, the Scrutiny Panel considered additional exemptions highlighted through the engagement activity and support the exemption from part-night lighting of lights in the immediate vicinity of registered community accessible defibrillator sites.

Recommendation 3

That the Executive considers formalising the list of exemption sites as part of the County Council Street Lighting Policy and include an additional exemption for community public access defibrillator sites where requested by local communities.

7.4 Social Impact & Personal Safety

The survey results indicate a focus on personal safety issues as part of the responses received. This includes perceptions in relation to poor conditions of pavements and other trip hazards. There were also a range of fears highlighted from residents about walking home from work in darkness and the duty of care implications.

The survey results indicate a perception that the change to part night street lighting has increased a general sense of social isolation and placed a curfew on some residents. It was also indicated that there has been a perceived increase in the levels of antisocial behaviour, youth drinking and drug taking.

From a public health perspective the survey results highlight a view that the change to part night street lighting has had a negative impact on vulnerable people and has had a negative effect on some residents' mental health.

There was also a perception that the implementation of part night street lighting has taken away the independence of disabled residents with limited mobility and had an impact on carers and care visitors attending late visits.

The Scrutiny Panel recommends that additional work is undertaken to review, improve and communicate more effectively with the public to support greater awareness and clarity of the messages in relation to the concerns highlighted around Crime Rates, Fears about Safety and Crime. Lincolnshire remains one of the safest areas in the Country and this needs to be more effectively communicated going forward. The scrutiny Panel supports greater awareness and clarity of the messages in relation to the concerns highlighted around Crime Rates, Fears about Safety and Crime.

Recommendation 4

That the Executive endorse working between the County Council and other agencies to plan communication activity with the public to reassure and address the cause of fears of crime surrounding the change to part night street lighting. And, to develop an action plan and work to reduce these fears and change public perceptions.

7.5 Economy & Employment

The survey results indicate a perceived concern across Lincolnshire due to the impact of part night lighting on shift workers. This includes the impact on businesses which form part of the night time economy (bars, pubs, clubs, etc) and also businesses where employees start/leave work during the hours of midnight to 06:00am. There was a strong suggestion that the Council should consider amending the part time lighting hours to 1am till 5am to reduce the level of impact on Businesses and shift workers.

The impact of part night lighting on shift workers was key theme highlighted from the public engagement during the review. The Scrutiny Panel propose a revision to the policy / list of exemptions to enable full night lighting to be restored within the immediate vicinity of large employers who operate shift working patterns such as Hospitals, Large Employers, etc.

The survey results also indicated that there is a perceived impact on tourism in coastal areas where many visitors are unaware of part night lighting.

The Scrutiny Panel notes that no conclusive evidence to suggest the change to part night street lighting has effected the night time economy was submitted as part of the process.

7.6 Environmental Impact

The results indicate that the majority of the environmental impacts highlighted from the survey were positive, such as the reduced energy usage and costs from part night lighting and the reduced carbon emissions. The reduced impact on wildlife due to darker nights and reduction in overall light pollution was also a key area highlighted.

The survey results also indicate a perception that there has been an increase in the volume of fly tipping since the introduction of part night lighting.

The Scrutiny Panel notes that overall the change to part night street lighting has resulted in a 50% reduction in energy consumption by street lighting across the County and over 6,200 tonnes of CO2 saved year on year. This is over a third of the council's five year carbon reduction target.

Other reported environmental impacts have also been positive, such as reduced levels of light pollution. There have been no indications of an increase in fly tipping since the introduction of part night lighting reported to the Scrutiny Panel as part of this process.

7.7 Public Engagement

The survey results indicate a perception that the County Council should have undertaken a full public consultation prior to making the decision to introduce part night lighting, and that local communities should have been consulted before the decision was considered.

Legal advice provided to the County Council was that as street lighting is a universal service, there is no statutory duty to consult as any changes fall within the wide discretion afforded local authorities in law to determine how to exercise statutory powers in the interests of their communities.

In addition, the survey also indicates a perception that the County Council should have given more consideration to the wider introduction of LED lighting as a way to reduce costs but maintain all night lighting or dimmed lighting levels.

The Scrutiny Panel recognises that concerns across Lincolnshire are localised and support the development of an appropriate protocol to enable local communities local street lighting to be upgraded to LED and reinstated to full night lighting where required and on request as part of routine maintenance.

The Scrutiny Panel do not propose for other authorities to adopt street lights from the County Council, however the option for agreements to be put in place to between the County Council and Town/Parish/District Councils to support local communities restore full night lighting where there is a genuine concern should to be available.

Recommendation 5

That the Executive considers the County Council developing an appropriate protocol to enable local communities (through Town/Parish/District Councils) to financially support street lighting to be upgraded to LED and reinstated to full night operation on request as part of routine maintenance.

7.8 Technical Considerations

The survey results highlight a number of technical observations from residents in relation to the inconsistency of switch off times for street lights using the sensors. In addition the quality of light provided by LED lamps was also highlighted as well as the overall brightness levels of street lights.

The Scrutiny Panel recognises the range of technical views submitted as part of the engagement process. With regards to the inconsistency of switch off times the Scrutiny Panel notes that the change between British Summertime and Greenwich Mean Time in the spring and autumn does mean that the sensors on the part-night lights enter a period of adjustment during spring and autumn. During this time the lights may start to turn off slightly earlier or later than normal. Unfortunately, this is unavoidable but should have little or no impact on safety. The technology required

for dimming street lighting is still relatively expensive and in many cases the cost cannot be recovered through subsequent energy savings.

The Scrutiny Panel accepts that more effective communication with the public needs to take place during the adjustment phase and would seek to ensure that more effective communication take place going forward.

8. Contributors to the review

The Scrutiny Panel would like to extend their sincere thanks to the following people who have provided assistance during this review:

Lincolnshire County Council

- Sara Barry (Safer Communities Manager)
- John Cook (Assistant Chief Fire Officer)
- John Monk (Group Manager (Design Services)
- Patrick Cant (Senior Engineer)
- Daniel Steel (Scrutiny Officer)
- Ethan Thorpe (Strategic Communications)
- Rachel Wilson (Democratic Services Officer)
- Graeme Butler (Road Safety Partnership)
- Rob Hewis (Programme Officer, Community Engagement Team)
- Samantha Hardy (Programme Officer, Community Engagement Team)
- Councillor C L Perraton-Williams

Lincolnshire Police

- Shaun West (Assistant Chief Constable)
- Becky Soutar (Crime Analyst)

- County Councillors
- District Councillors
- Parish / Town Councils
- District Councils
- 5305 public engagement responses

More Information

If you would like any more information about the work of Overview and Scrutiny at Lincolnshire County Council then please get in touch with the Scrutiny Team by calling 01522 552102 or by e-mailing the Team at scrutiny@lincolnshire.gov.uk

Appendices

Appendix A	Summary of Recommendations

Background Information

Document	Location
Lincolnshire Police Street Lighting & Crime Levels Report	https://www.lincs.police.uk/news-campaigns/news/2017/street-lighting-crime-levels-report-released/
Research published in the Journal of Epidemiology and Community Health based on 14 years of data from 62 local authorities across England and Wales	http://jech.bmj.com/content/early/2015/07/08/jech-2015-206012.short?g=w_jech_ahead_tab
Highways Act 1980 – Section 97	https://www.legislation.gov.uk/ukpga/1980/66/section/97
The Highways (Road Humps) Regulations 1999 (Regulation 5)	http://www.legislation.gov.uk/uksi/1999/1025/regulation/5/made

	Recommendation	Theme	Lead Areas
1	That Lincolnshire Police are requested to continue to review and update a street lighting crime data report for consideration by Lincolnshire County Council's Public Protection and Communities Scrutiny Committee on an annual basis.	Crime Rates, Fears about Safety and Crime	• Safer Communities • Lincolnshire Police • Public Protection and Communities Scrutiny Committee
2	That the Lincolnshire Road Safety Partnership ensures data regarding street lighting levels is captured and reported as part of an analysis of road safety and collisions. And, for this data to be reported and considered by Lincolnshire County Council's Public Protection and Communities Scrutiny Committee on an annual basis.	Road Safety and Collisions	• Lincolnshire Road Safety Partnership • Public Protection and Communities Scrutiny Committee
3	That the Executive considers formalising the list of exemption sites as part of the County Council Street Lighting Policy and include an additional exemption for community public access defibrillator sites where requested by local communities.	Impact on Emergency Services	• Street Lighting team (Technical Services)
4	That the Executive endorse working between the County Council and other agencies to plan communication activity with the public to reassure and address the cause of fears of crime surrounding the change to part night street lighting. And, to develop an action plan and work to reduce these fears and change public perceptions.	Social Impact & Personal Safety	• TBC
5	That the Executive considers the County Council developing an appropriate protocol to enable local communities (through Town/Parish/District Councils) to financially support street lighting to be upgraded to LED and reinstated to full night operation on request and as part of routine maintenance.	Public Engagement	• Street Lighting team (Technical Services)

This report is issued by:
Lincolnshire County Council Democratic Services

You can contact us in the following ways:

By Post:
Democratic Services, County Offices, Newland, Lincoln LN1 1YL

By email:
scrutiny@lincolnshire.gov.uk

Website:
www.lincolnshire.gov.uk