ITEM No …3……

REPORT TO: **COMMUNITY SAFETY & PUBLIC PROTECTION COMMITTEE – 24 APRIL 2017**

REPORT ON: **TAYSIDE JOINT HEALTH PROTECTION PLAN 2017-19**

REPORT BY: **EXECUTIVE DIRECTOR OF NEIGHBOURHOOD SERVICES**

REPORT NO: **126-2017**

1.0 PURPOSE OF REPORT

1.1 The Public Health etc. (Scotland) Act 2008, requires NHS Tayside to produce every two years a Joint Public Health Protection Plan with Angus, Dundee City and Perth and Kinross Councils. This Plan provides an overview of health protection priorities, provision and preparedness within Tayside and highlights the collaborative nature of health protection work.

1.2 This report seeks Committee approval of the Tayside Joint Public Health Protection Plan 2017 to 2019 (JPHPP), included as an Appendix to this report.

2.0 RECOMMENDATIONS

2.1 It is recommended that the Committee approves the Tayside Joint Public Health Protection Plan, and give a commitment on behalf of Dundee City Council to work with NHS Tayside, Perth and Kinross and Angus Councils to address the priorities identified in the plan.

3.0 FINANCIAL IMPLICATIONS

3.1 There are no financial implications in approving the Tayside Joint Health Protection Plan 2017 to 2019.

4.0 MAIN TEXT

4.1 Dundee City Council's Health Protection Duties and the Public Health etc. (Scotland) Act 2008 - the environmental health role in Community Safety and Protection.

4.1.1 Health protection services have a strong basis in Scotland's civic history and rely on a collaborative approach between partners. The Public Health etc. (Scotland) Act 2008 directs this health protection effort. Environmental health services, within Community Safety and Protection, provide a wide range of integrated services to protect public health and the environment and to advance high standards.

4.1.2 Much of this work of can be described as Health Protection. This means protecting people from hazards, whether biological, chemical or physical exposures occurring in the physical and social environment, which can damage their health.

4.2 **Working with the Tayside NHS Health Protection Team**

4.2.1 NHS Boards have a health protection function mostly relating to the control of communicable diseases and diseases arising from contact with substances hazardous to health. Other aspects of the function are the co-ordination of immunisation programmes, and working to reduce the burden of infectious disease in the community.

Environmental health services work with the Tayside NHS Health Protection Team consisting of Consultants in Public Health Medicine, Infection Control Nurses and support staff over a wide range of health protection issues. This includes collaboration with our counterparts in Angus and Perth and Kinross Councils.

4.3 **The Public Health etc. (Scotland) Act 2008 and Joint Health Protection Plans**

4.3.1 The Public Health etc. (Scotland) Act 2008 (the Act) legislates for the protection of public health from infectious diseases, contamination or other such hazards. Part 1 of the Act requires each health board area to develop a Joint Public Health Protection Plan (JPHPP). The plan provides an overview of health protection priorities, provision and preparedness.

Dundee City Council has a statutory duty to protect public health. This protection includes preventing, controlling and responding to such hazards. Similar duties are contained in a wide range of statutory instruments covering subjects such as, environmental protection, food safety and workplace health and safety.

4.4 **The Tayside Joint Public Health Protection Plan 2017 to 2019**

4.4.1 The JPHPP 2017-2019 was produced by the NHS Tayside's Health Protection Team officers from Dundee City Council, Perth and Kinross and Angus Councils. The Plan is provided in Appendix 1.

The Plan was approved by Tayside Health Board in February 2017, subject to the formal ratification of it by the three participating Councils. Committee are asked to approve the plan. The next review of the Plan will in 2020.

4.4.2 Public health protection is subject to sporadic and often unpredictable challenges. An overarching aim of the plan is for Tayside's health protection function to be robust and responsive to unforeseeable events. Maintaining and developing current capacity and resilience within Tayside is essential to this aim.

4.5 **Overview of the plan**

4.5.1 The Plan describes health protection priorities, provision and preparedness within the Tayside NHS area.

The main features of the plan are:-

- A description of how the Board and the Local Authorities deal with a range of health protection topics and an outline of area identified as requiring further work.

- Commitments that under the plan all parties will work together to continuously improve health protection working in Tayside.

- A description of the total health protection resources available in Tayside for health protection activities. This consists of the staff employed within the three Councils' environmental health functions and the health protection staff of Tayside NHS Directorate of Public Health.

- The definition of capacity and resilience.

- A summary of each Council's environmental health activities are listed and this includes day to day routine preventative work (inspections, investigations etc). The public safety role of the trading standards function is also highlighted.

- A description of mutual aid arrangements between Councils including those within the Tayside NHS area.

4.6 **Recommendations in the Plan**

4.6.1 There are 8 recommendations set out in Section 9 (page 39) of the Plan, 5 of which will directly involve the three Councils working together with NHS Tayside. Below are topics that have been identified that require further work in the planning period 2017-19. These are:-

- Share learning from leisure pool incidents to reduce swimming pool related infection
- Implementation of Cleaner Air for Scotland Strategy in Tayside
- Migrant health
- Scottish Health Protection Network gastrointestinal zoonosis group priorities
- Reviewing and revising existing protocols and emergency plans in accordance with the schedule at Appendix B of the plan.

5.0 POLICY IMPLICATIONS

5.1 This report has been screened for any policy implications in respect of Sustainability, Strategic Environmental Assessment, Anti-Poverty, Equality Impact Assessment and Risk Management – an Equality Impact Assessment report is attached.

6.0 CONSULTATIONS

6.1 The Council Management Team have been consulted in the preparation of this report.

7.0 BACKGROUND PAPERS

7.1 None.

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Executive Director of Neighbourhood Services

Tom Stirling
Head of Community Safety & Protection

11 April 2017

APPENDIX 1

Tayside

Joint Public Health Protection Plan

2017-2019

Table of Contents

Introduction

Inequalities play an important role in the epidemiology of infectious diseases, and illness caused by environmental hazards. In Scotland infectious diseases and environmental hazards disproportionately affect marginalised populations and can be linked to upstream determinants such as low socio economic status and migration, which can lead to downstream risk factors such as tobacco, alcohol and drug use, poor living conditions, limited social networks and difficulty in accessing services.

The function of health protection services is to take action and provide leadership, expert guidance and support to prevent and manage risks to the health of the public from infectious diseases and environmental hazards. There are three key elements in the delivery of this function:

- Risk identification
- Risk management
- Risk communication

Like many public health services in Scotland, health protection services rely on coordinated strategic efforts between various organisations. The introduction of the Public Health etc (Scotland) Act 2008 updates and replaces legislation dating from as far back as 1897, directing this health protection effort. Public Health legislation places statutory roles on those who provide the health protection service, defining Competent Persons for the delivery of functions in relation to premises (led by the Local Authority) and persons (Lead by the NHS Board). Statutory duties and responsibilities include the surveillance and public health management of notifiable diseases, organisms and health risk states, and monitoring, control and management of environmental health hazards. In delivering these functions, Competent Persons have significant powers to require, or seek the Sherriff to enforce, restrictions on businesses and individuals, including for example closure of premises, decontamination, and quarantine of individuals.

The importance of this Act is further supported by the development of the Scottish Health Protection Network, production of the 2015 Review of Public Health in Scotland report and subsequent ongoing Shared Services Review. This seeks to provide a clear basis for future work that will strengthen and re-focus all aspects of the public health function in Scotland. There is also the need for strategic resilience within public health to sustain the capacity and the relationships within health protection to manage outbreaks and public health incidents. These skills and competencies need to be maintained and the capability to escalate and sustain a response needs to be assured.

The importance of this integration of effort is as great today as it has always been. The Public Health Act of 2008 required the development of Joint Public Health Protection Plans, setting out the arrangements in local areas for delivery of the Health Protection function. I am pleased to present Tayside's third JPHPP for the period 2017-2019, which has been written jointly by NHS Tayside, Angus Council, Dundee City Council and Perth and Kinross Council.

The plan provides an overview of health protection priorities, provision and preparedness within Tayside.

The plan describes how the Board and the Local Authorities deal with a range of health protection topics and outlines areas we have identified that require further work.

What the recent past demonstrates is that the health protection function is subject to sporadic and often unpredictable challenges. An overarching aim of this plan is for Tayside's health protection function to be robust to manage unforeseeable events;

ensuring there is sufficient capacity and resilience within Tayside is essential to this aim. A decline in core health protection resources within any party to this plan could affect the overall capacity within Tayside to react effectively to incidents.

Dr Drew Walker
Director of Public Health
NHS Tayside

January 2017

Executive summary

NHS Boards have a health protection function mostly relating to the control of infectious diseases and diseases arising from contact with substances hazardous to health. A significant proportion of the health protection function of boards relates to statutory duties. Other aspects of the function are the co-ordination of immunisation programmes, and working to reduce the burden of infectious disease in the community.

It is NHS Tayside's Health Protection Team's vision to take action and provide leadership, expert guidance and support to prevent and manage risks to the health of the public from infectious diseases and environmental hazards. Similarly, local authorities have a health protection function, which is predominantly delivered through local authority environmental health services. In practice, health board and local authority functions are co-ordinated to ensure that the health of people in Tayside is protected as effectively as possible from the range of infectious and environmental hazards to health.

The Public Health etc (Scotland) Act 2008 (hereafter referred to as 'The Act') consolidates and updates public health legislation relating to 'protecting public health from infectious diseases, contamination or other such hazards, which constitute a danger to human health.' Part 1 of the Act requires each health board area to develop a Joint Public Health Protection Plan (JPHPP) to provide an overview of health protection (infectious disease and environmental health) priorities, provision and preparedness.

The importance of this Act is further supported by the development of the Scottish Health Protection Network, production of the 2015 Review of Public Health in Scotland report and subsequent ongoing Shared Services Review. This seeks to provide a clear basis for future work that will strengthen and re-focus the public health function in Scotland. There is also the need for strategic resilience within public health to sustain the capacity and the relationships within health protection to manage outbreaks and public health incidents. The skills and competencies need to be maintained and the capability to escalate and sustain a response needs to be assured.

In cognisance of this Tayside's JPHPP for 2017-19 has been written jointly by NHS Tayside, Angus Council, Dundee City Council and Perth and Kinross Council and will be renewed every two years. The JPHPP provides an overview of the geography and demography of Tayside and identifies health protection risks associated with these specific features. The plan describes health protection activities in Tayside and the resources with which the health protection function is delivered.

The JPHPP recommends a number of actions to be delivered jointly between health protection partners across Tayside, in response to the following agreed priorities for 2017-19:

- Progress recommendations from the Health Protection Team away day in January 2016 to improve and develop longer term strategic team vision, cohesion and priorities.
- Share learning from leisure pool incidents to reduce swimming pool related infection
- Implementation of Cleaner Air for Scotland Strategy in Tayside
- BBV focus on prevention
- Migrant health
- Scottish Health Protection Network GIZ priorities
- On-going resilience for Health Protection Team
- Reviewing and revising existing protocols and emergency plans in accordance with the schedule at Appendix B

1.0 Overview of NHS Tayside and its three Local Authorities

Tayside Population Estimates

In 2015, the estimated total population of Tayside was 415,040[1]. The NHS Board is coterminous with the three local authority areas of Angus, Dundee City and Perth & Kinross, covering in total 7,527 sq km with mixed urban and highly rural population distribution (Table 1). Tayside's population accounts for approximately 7.7% of the Scottish population.

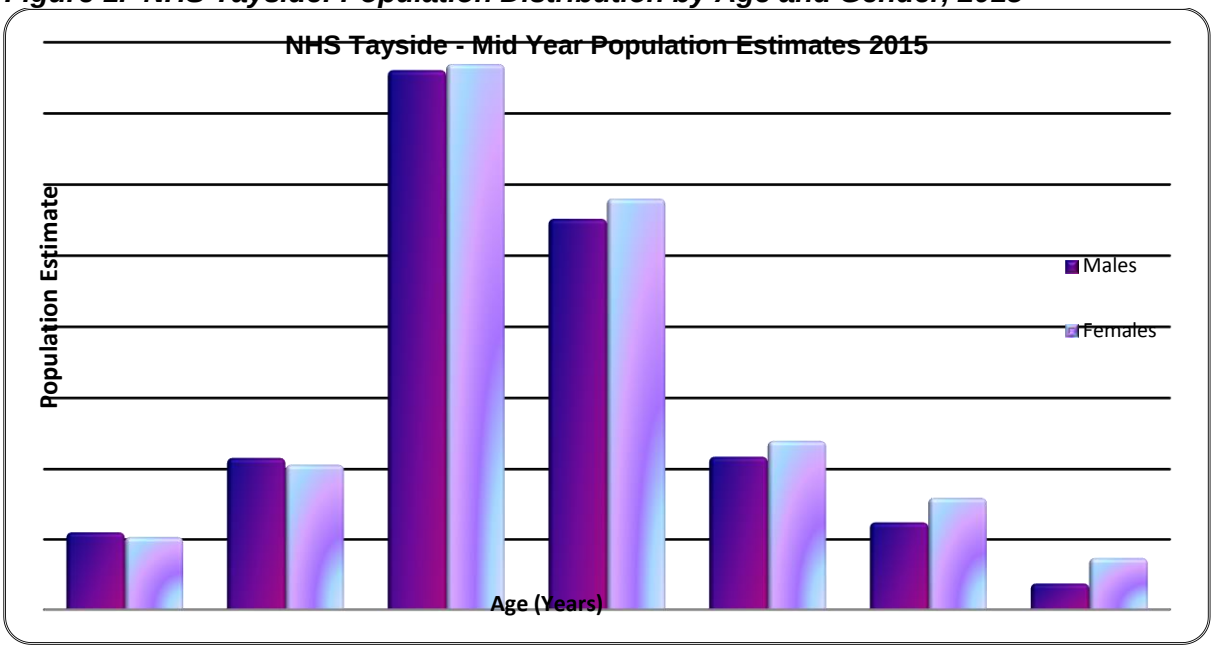
Table 1. NHS Tayside: Land Area, Population and Density, 30 June 2015

Administrative Area	Estimated Population 30 June 2015	Area[i] *(sq km)*	Density[ii] *(Persons per sq km)*
Tayside	**415,040**	**7,527**	**55**
Angus	*116,900*	*2,182*	*54*
Dundee City	*148,210*	*60*	*2,477*
Perth & Kinross	*149,930*	*5,286*	*28*

Source: NRS Mid Year Populations Estimates, June 30th 2015 (2011 Census Based) - NHST Populations Table 9
Notes:
i. Land areas were derived from Standard Area Measurements produced by the Office for National Statistics in December 2015. Figures may not add exactly because of rounding.
ii. Persons per sq km calculated using actual, not rounded areas.

In 2015, the overall gender distribution (all ages) within Tayside was 48.6% male and 51.4% female, however the gender proportions very much depend on the age band under consideration, as displayed in Figure 1.

Figure 1. NHS Tayside: Population Distribution by Age and Gender, 2015



Source: NRS Mid Year Populations Estimates, June 30th 2015 (2011 Census Based)

As the population ages, the male to female ratio becomes more apparent, especially within the elderly population, with more females surviving in the older age groups. In 2015, for those 65+ years, there were 45% males and 55% females, these proportions become 41% and 59% respectively for those aged 75+ years.

While all three Tayside local authority areas are fairly similar in terms of age and gender distribution, due to Dundee's large student population, this Tayside local area has a greater

[1] *NRS (formerly GRO(S)) - Mid-year population estimates, 2015 (2011 Census Based)*

proportion of 20-24 year olds year-on-year than its other Tayside counterparts. In 2015, this age group represented 10.2% of the Dundee population, compared with 5.4% of the population in Angus and 5.6% Perth & Kinross.

As the Tayside population ages, a slight difference across the local authority areas emerges. In 2015, those aged 60+ years accounted for 28.9% of the population within Angus and 28.8% in Perth & Kinross; a slightly higher proportion than across the Dundee City area (22.5%).

The 2015 mid-year population (415,040 persons) demonstrated an increase in 1,240 individuals (0.3% increase) from the 2014[2] estimate (413,800 persons).

Tayside Population Projections[3]

National Records of Scotland (NRS) estimate that the population of NHS Tayside will increase by 14.1% to 469,606 in 2037 *(based on 2012 population projection figures)*. The 2012 based projections predict that across Tayside's local authority areas, the population will increase in both Dundee City *(+15.6% to 170,811)* and Perth & Kinross *(+24.2% to 183,468),* while remaining fairly similar in Angus *(-0.8% to 115,327).*

In general, Tayside's population is ageing, particularly with increases in the population aged 65 and over. While those aged 65 and over account for 19.5% *(80,350)* of the 2012 population, this age group is anticipated to increase to representing 25.4% *(119,513)* of the population in 2037. The 85+ band is expected to make the largest increase by 2037. The population of this age band is anticipated to increase by 139.7% *(24,801)* in Tayside as a whole, 165.8% *(8,050)* in Angus, 85.3% *(6,100)* in Dundee City and 164.5% (10,651) in Perth and Kinross.

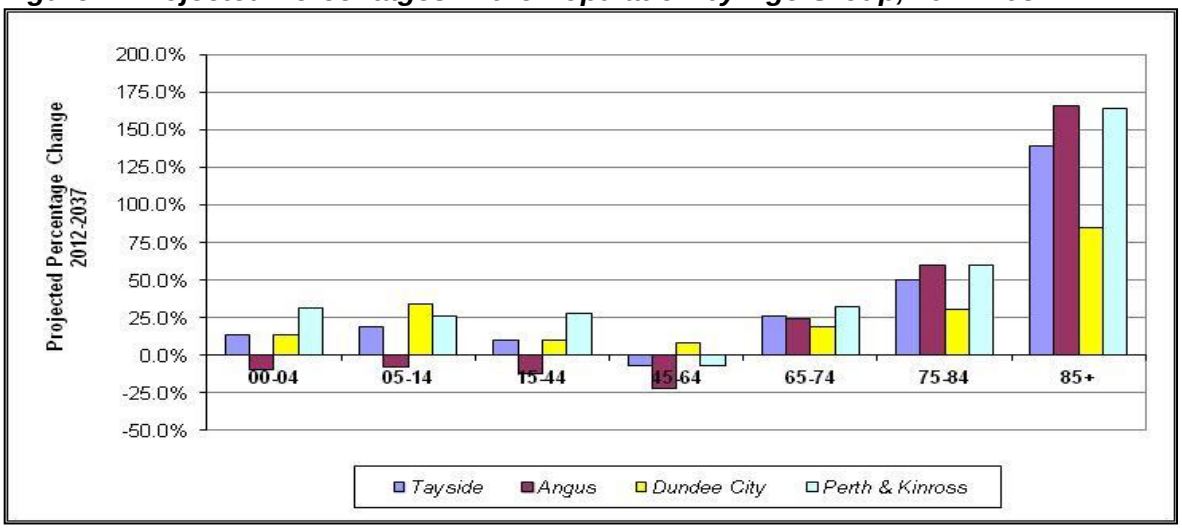
While the overall population across Tayside is predicted to increase by 2037, there are differences within the age bands. Between 2012 and 2037, the 45-64 age group is expected to decrease across Tayside *(-6.7%)*, as well as within Angus *(-22.1%)* and Perth & Kinross *(-7.1%)*. In addition, Angus is also projected to show population decreases in all age groups below 44 years of age.

These changes are summarised in Figure 2 which presents the projected percentage changes in the population by age group between 2012 - 2037.

[2] *2015 – Revised 2011 (2011 Census Re-Based) population estimate*

[3] *Population projections can be useful for planning and providing services, however they have limitations and should be viewed with some caution and are continually updated.*

Figure 2. Projected Percentages in the Population by Age Group, 2012-2037



Source: NRS Population Projections, 2012 Based (January 2016)

Projected population estimates predict that the male proportion of the population will increase over the coming years. In 2012, 43.7% of the Tayside population aged 65 and over were male, compared with the projected 45.3% in 2037. This proportion change may potentially be a factor to consider when planning service needs in the community.

The age and gender structure of the populations for the three Tayside local authority areas are shown in Figure 3.1 – 3.3, comparing 2012 estimates with the 2037 projection figures.

Figure 3. The Population Profile of the Three Tayside Local Area, Population Estimate 2012 & Projected Population 2037 (2012 based)

Figure 3.1 Angus Profile

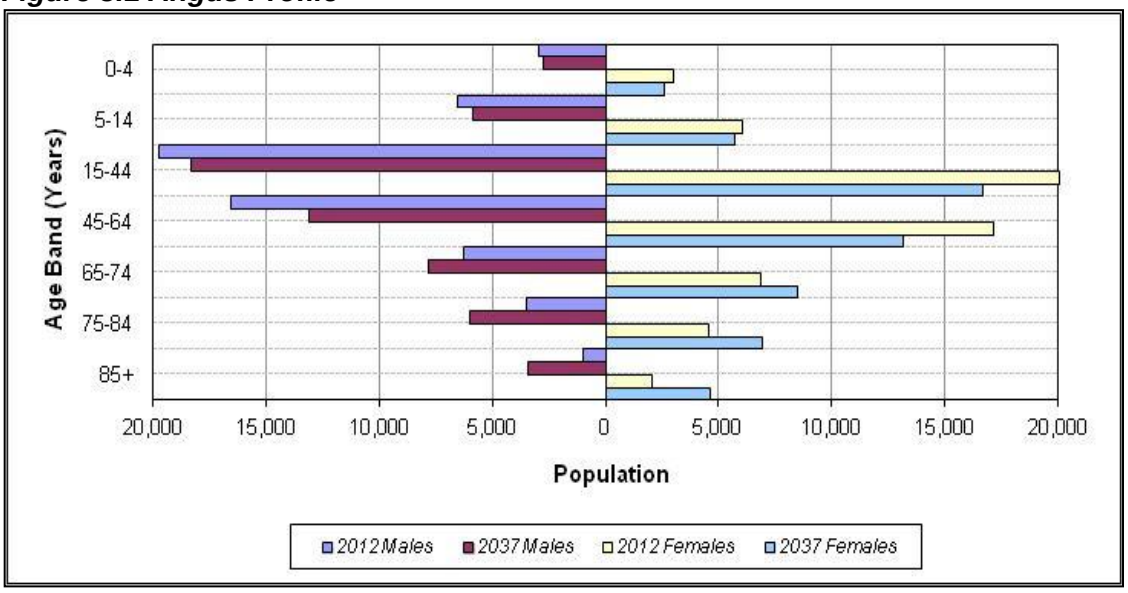


Figure 3.2 Dundee City Profile

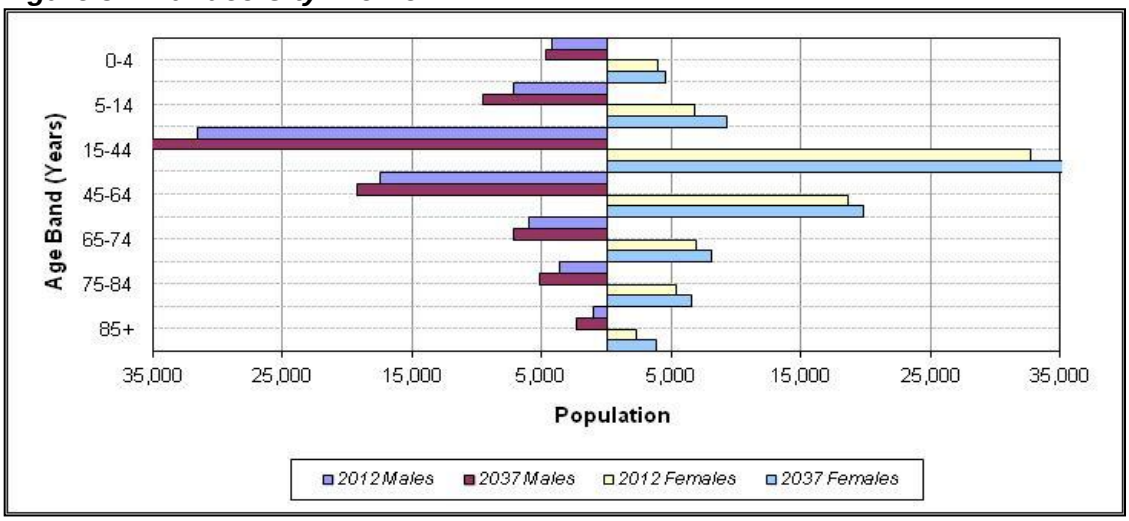


Figure 3.3 Perth & Kinross Profile

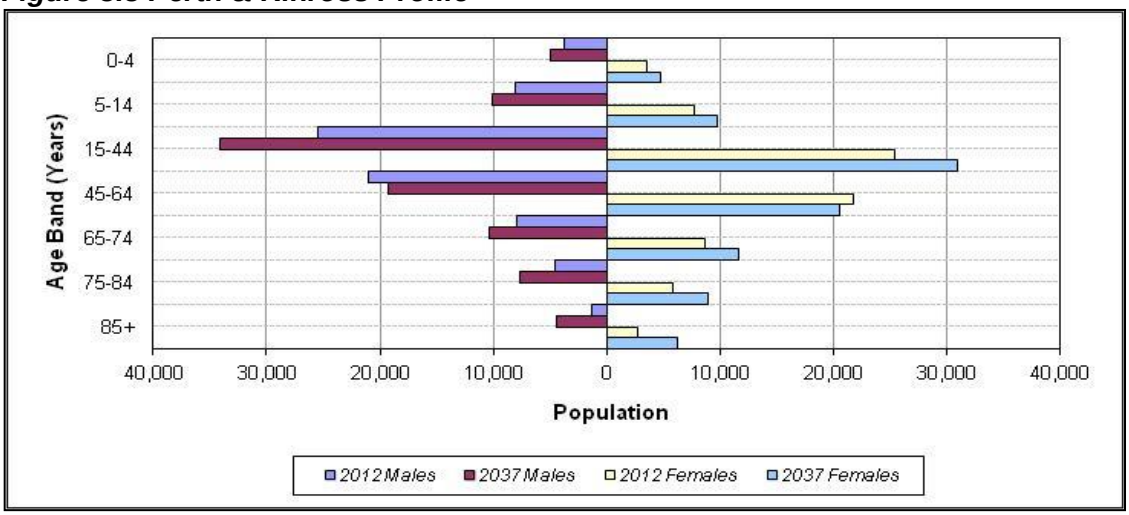


Fig 3..1 - 3.3 Source: NRS Mid-Year Population Estimates [2012] & Population Projections [2037] (January 2016)

Tayside Deprivation (SIMD)

Health and deprivation are linked on various levels. People from deprived areas have higher incidence and prevalence of all the major diseases, have higher mortality rates and show higher rates of health damaging behaviours, such as smoking and poor nutrition. Patterns of higher access to primary care but lower access to secondary care tend to be demonstrated by those living in deprived areas. Access to screening is lower and there is higher likelihood of late presentation with disease among people in deprived areas.

Scottish Index of Multiple Deprivation (SIMD 2012)[4]: The Scottish Index of Multiple Deprivation (SIMD) is the Scottish Government's official tool as an area-based measure of deprivation. The SIMD categorises Scotland into 6,505 small areas (data zones), each containing around 350 households (average 800 people living in each). The Index provides a relative ranking for each data zone, from 1 (most deprived) to 6,505 (least deprived). This results in a comprehensive picture of relative area deprivation across Scotland and can be used to target policies and resources at the places with greatest need.

[4] *SIMD is regularly updated, most currently available measure being SIMD 2012. SIMD identifies deprived areas, not deprived individuals, not everyone living in a deprived area is deprived, and not all deprived people live in deprived areas.*

Table 2 summarises the SIMD 2012 for Tayside's three local authorities[5]. The table shows that Dundee City has the largest proportion of data zones in every deprived category, both in terms of Local and National Share compared with its other Tayside counterparts.

Table 2. SIMD 2012: Local and National Share of Data Zones in the Most Deprived 5%, 10%, 15% & 20% by Local Authority Area

Level of Deprivation	Data	Local Authority			
		Angus	Dundee City	Perth & Kinross	Scotland
5% Most Deprived	No. of Data zones	0	19	2	325
	Local Share[i] (%)	0.0	10.6	1.1	5.0
	National Share[ii] (%)	0.0	5.8	0.6	100.0
10% Most Deprived	No. of Data zones	2	36	2	651
	Local Share [i] (%)	1.4	20.1	1.1	10.0
	National Share[ii] (%)	0.3	5.5	0.3	100.0
15% Most Deprived	No. of Data zones	3	55	6	976
	Local Share[i] (%)	2.1	30.7	3.4	15.0
	National Share[ii] (%)	0.3	5.6	0.6	100.0
20% Most Deprived	No. of Data zones	9	69	11	1301
	Local Share[i] (%)	6.3	38.5	6.3	20.0
	National Share[ii] (%)	0.7	5.3	0.8	100.0
Total Number of Data Zones		**142**	**179**	**175**	**6,505**

Source: SIMD 2012, Tables 2.1a-2.1d &Table 2.2a-2.2d, Scottish Government Website (January 2016)

Notes:

i. 'The 'Local Share' is the proportion of an area's data zones that fall into the 15% most deprived in Scotland. This measure is not influenced by the size of an area and so picks out areas with concentrations of deprived data zones whether these areas are big or small. Example: An area consists of 300 data zones, 30 data zones fall into the 15% most deprived category, and the local share is 10% (30/300).

ii. The 'National Share' is the proportion of the most deprived data zones in Scotland that are found in a particular area e.g. local authority. The 15% most deprived in Scotland that fall in a particular Local Authority area. This measure is heavily influenced by the size of an area since bigger areas will have more data zones and so are more likely to have more data zones in the 15% most deprived than smaller areas. Example: 976 data zones are in the 15% most deprived areas in Scotland. If an area was built up of 300 data zones and 30 of its data zones were in the 15% most deprived, then its national share would be 3% (30/976).

[5] *Community Health Partnership (CHP) numbers and local/national share percentages equal to Tayside local authority level.*

Local Authority National Shares: 57.0% of Scotland's 15% most deprived (976) data zones are located in five local authorities: Glasgow (29.6%), North Lanarkshire (10.2%), Fife (5.9%), Dundee City (5.6%; *55 data zones*), and Edinburgh (5.5%). These five local authorities contain 37% of Scotland's population.

In SIMD 2012, 3 (0.3%) of the 976 data zones in the 15% most deprived data zones in Scotland were found in Angus. A further 6 (0.6%) data zones were found in Perth & Kinross in terms of National Share.

Local Authority Local Shares: The five local authorities with the largest local share of Scotland's 15% most deprived data zones are Glasgow (41.6%), Inverclyde (40.0%), Dundee (30.7%; *55 data zones*), West Dunbartonshire (26.3%), and North Ayrshire (25.7%). These are the same five local authorities as in SIMD 2009.

In SIMD 2012, 3 (2.1%) of Angus's 142 data zones were found in the 15% most deprived data zones in Scotland, in comparison 6 (3.4%) of Perth & Kinross's 175 data zones were found in the 15% most deprived data zones in Scotland.

Health Boards: Tayside Health Board had 64 data zones in the 15% most deprived, 12.9% of the Local Share and 6.6% of the National Share. This can be compared with the Scottish Health Board, 'Greater Glasgow & Clyde' with the largest proportion of their data zones in the 15% most deprived in both Local and National Shares of 30.1% and 45.4% respectively.

Most Deprived: The most deprived data zone in Angus in the overall SIMD 2012 was S01000626, found in the Intermediate Zone of 'Arbroath Warddykes'. With a rank of 509, it is amongst the 10% most deprived areas in Scotland.

Amongst the 5% most deprived areas in Scotland are the two most deprived data zones in each of Dundee City and Perth & Kinross. In the overall SIMD 2012, the most deprived data zone in Dundee City was S01001253 (Intermediate Zone - Whitfield), a rank of 54, while in Perth & Kinross the most deprived data zone was S01005075 (Intermediate Zone - Muirton), with a rank of 137.

SIMD Health Domain: The health domain within SIMD identifies areas with a higher than expected level of ill-health or mortality for the age-sex profile of the population using a set list of indicators[6,7].

Table 3 summarises the Local and National Shares of SIMD 2012 for the distribution of the 15% most deprived data zones in the health domain for Tayside three local authority areas.

[6] *a. Standardised Mortality Ratio b. Hospital episodes related to alcohol use c. Hospital episodes related to drug use d. Comparative Illness Factor e. Emergency admissions to hospital f. Proportion of population being prescribed drugs for anxiety, depression or psychosis g. Proportion of live singleton births of low birth weight*

[7] *The indicators used are the same as for SIMD 2009, however there has been a change to the methodology for three of the health indicators; SIMD 2012 now uses continuous inpatient stays (CISs) to count the total number of stays in NHS hospitals. As a result of the change, caution should be used when interpreting change between the SIMD 2009 and SIMD 2012 health domains, as they are not directly comparable.*

Table 3. Local and National Share of Data Zones in the 15% Most Deprived on the Health Domain in SIMD 2012, for Tayside's Local Authorities

Tayside Local Authority	15% MOST DEPRIVED DATA ZONES HEALTH DOMAIN / SIMD 2012					
	National Share			Local Share		
	Total Data Zones	No. Data Zones	Percent (%)	Total Data Zones	No. Data Zones	Percent (%)
Angus	**976 (Scotland)**	**1**	**0.1**	**142**	**1**	**0.7**
Dundee City		**35**	**3.6**	**179**	**35**	**19.6**
Perth & Kinross		**8**	**0.8**	**175**	**8**	**4.6**

Source: SIMD 2012 – Local Authority Individual Reports, Scottish Government Website (January 2016)

i) Angus Health Doman: The most health deprived data zone in Angus in SIMD 2012 is S01000620, found in the Intermediate Zone of 'Arbroath Warddykes', ranked at 777, it is amongst the 15% most health deprived areas in Scotland.

ii) Dundee Health Domain: The most health deprived data zone in Dundee City in SIMD 2012 is S01001200, found in the Intermediate Zone of 'Linlathen and Midcraigie', ranked as 128, it is amongst the 5% most health deprived areas in Scotland.

iii) Perth & Kinross Health Domain: The most health deprived data zone in Perth & Kinross in SIMD 2012 is S01005075, found in the Intermediate Zone of 'Muirton' and ranked as 201, it is amongst the 5% most health deprived areas in Scotland.

SIMD 2012: Tayside Population Estimates as at June 30th, 2014

Figures 4.1, 4.2 and 4.3 show the population structure of each Tayside CHP by SIMD 2012 quintile. The charts show that Dundee City has the largest deprived population (Quintile 1) across Tayside's three local authority areas for both males and females.In comparison, both Angus and Perth & Kinross have their largest population portion within quintile 4, representing a more affluent (less deprived) male and female population.

Figure 4. Tayside Population Estimates 2014 (as at June 30th) by SIMD 2012 Quintile:

Figure 4.1 Angus Population Estimates by SIMD 2012 Quintile (as at 30th June 2014)

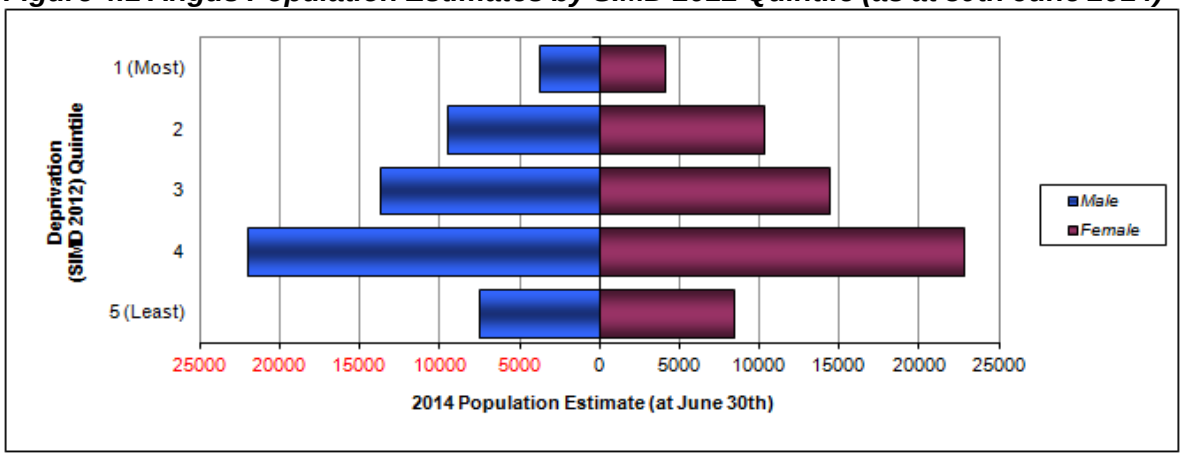


Figure 4.2 Dundee Population Estimates by SIMD 2012 Quintile (as at 30th June 2014)

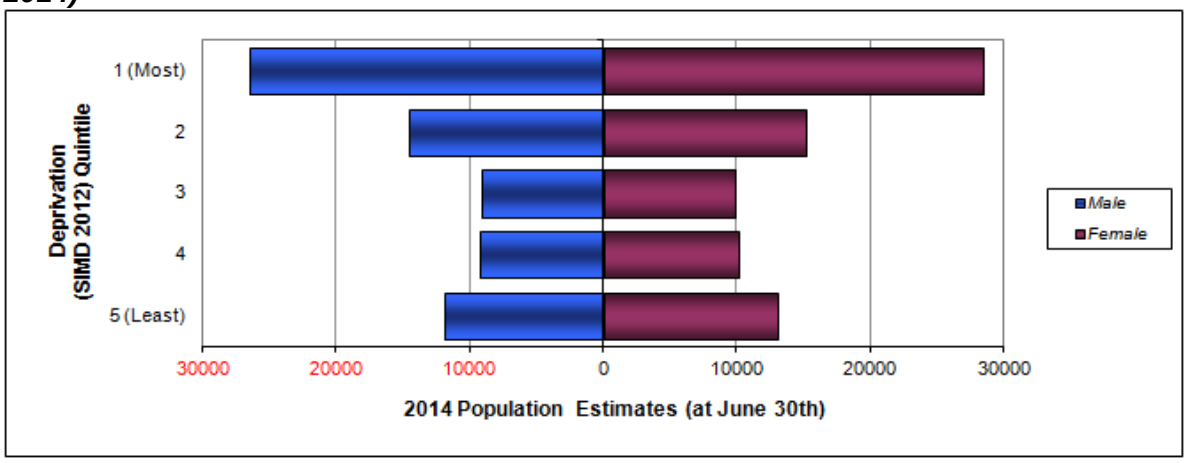


Figure 4.3 Perth and Kinross Population Estimates by SIMD 2012 Quintile (as at 30th June 2014)

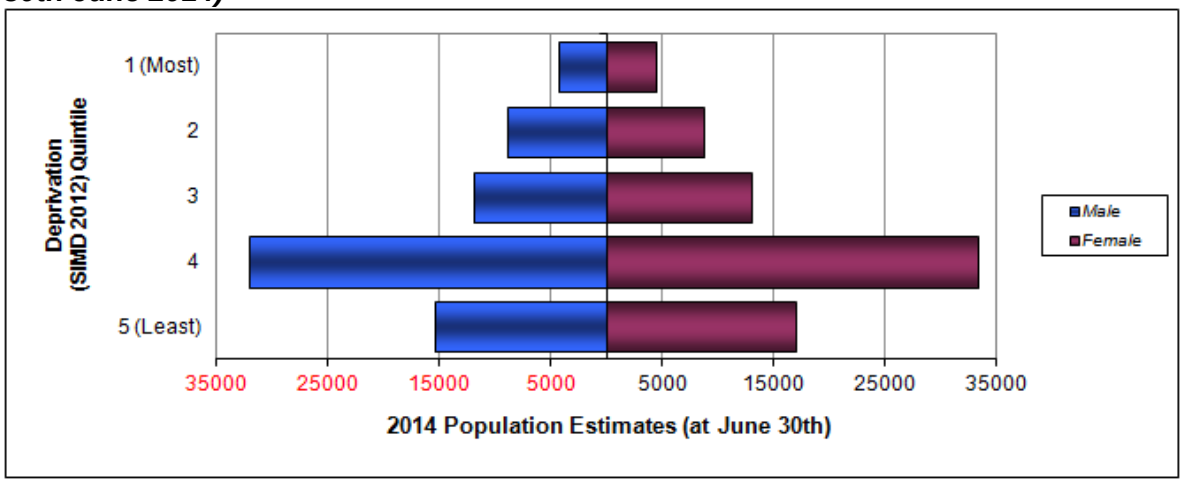


Fig 4.1 - 4.3 Source: NRS - Small Area Population Estimates (2014, Based on 2001 Data Zones) & SIMD 2012 - Scottish Government (January 2016)

Note: Small area populations estimates for 2015 have not been published yet (June 2016)

Ethnic Population

Over the last decade between the 2001 Census and 2011 Census, the non-white ethnic population within Tayside has increased by over 5,500 individuals to 13,294 (7,495 in 2001). The proportion of the total Tayside population, accounted for by this non-white ethnic population group, increased from 1.9% to 3.2% over the last decade.

Table 4 summarises the 2011 census figures for Tayside's ethnic groups, showing that at the time of the census, 'Asian' (inc. Scottish & British) recorded the largest non-white ethnic population group within Tayside (2.1% of the Tayside population; N = 8,611), followed in proportion by the 'African' (0.4% of the Tayside population; N = 1,527), and then both the 'Other -' and 'Mixed/Multiple -' ethnic population groups (0.3% of the Tayside population each; N = 1,241 & 1,420 respectively).

Table 4. Tayside's Ethnic Population Groups (Census 2011)

Administrative Area	All People	Ethnic Groups (Census 2011)						
		White[a]	Asian, Asian Scottish or Asian British[b]	African[c]	Caribbean or Black[d]	Other Ethnic Groups[e]	Mixed or Multiple Ethnic Groups	**All Non-White Ethnic Groups**
Tayside	*409,709*	396,415	8,611	1,527	495	1,241	1,420	**13,294**
		96.8%	2.1%	0.4%	0.1%	0.3%	0.3%	**3.2%**
Angus	*115,978*	114,468	921	125	75	125	264	**1,510**
		98.7%	0.8%	0.1%	0.1%	0.1%	0.2%	**1.3%**
Dundee	*147,268*	138,460	5,838	1,170	269	846	685	**8,808**
		94.0%	4.0%	0.8%	0.2%	0.6%	0.5%	**6.0%**
Perth & Kinross	*146,652*	143,676	1,852	232	151	270	471	**2,976**
		98.0%	1.3%	0.2%	0.1%	0.2%	0.3%	**2.0%**

Source: Census 2011 (www.scotlandscensus.gov.uk) Release 2A, Table KS201SC "Ethnic Group by Health Board and Council Area"

Notes

a. Encompasses: White: Scottish; White: Other British; White: Irish; White: Gypsy/Traveller; White: Polish; White: Other White

b. Encompasses: Pakistani, Pakistani Scottish or Pakistani British; Indian, Indian Scottish or Indian British; Bangladeshi, Bangladeshi Scottish or Bangladeshi British; Chinese, Chinese Scottish or Chinese British; Other Asian

c. Encompasses: African, African Scottish or African British; Other African

d. Encompasses: Caribbean, Caribbean Scottish or Caribbean British; Black, Black Scottish or Black British; Other Caribbean or Black

e. Encompasses: Arab, Arab Scottish or Arab British; Other ethnic group

All three of Tayside's council areas have recorded increases in their non-white ethnic population groups between the 2011 and previous census. As displayed in Table 4, of Tayside's three council areas, Dundee City recorded the highest proportion of non-white ethnic groups within its own council area population (6.0% of the Dundee population; N = 8,808). Dundee City's non-white ethnic population accounted for 66.3% of Tayside's total non-white ethnic population, the largest contribution of Tayside's three council areas.

Life Expectancy

'Life Expectancy' (LE) at birth is a common measure of mortality, useful in comparing the 'health' of one country to another. It is an estimate of the average number of years a newborn infant is expected to live if current mortality rates continue to apply. Between males and females, and among different geographical and socio-economic groups, there can be considerable variations. All figures should be viewed as providing a general indication of LE, rather than precise and robust figures.

The expectation of life at birth in Scotland has improved greatly over the last 30 years and improvements in life expectancy at birth are projected to continue. Women continue to live longer than men; however the gap has been closing over more recent years.

While both Scottish male and female life expectancy has continued to increase to 77.05 years for males and 81.06 years for females (2012-2014 based), these figures remain below the UK average of 79.07 years and 82.81 years respectively. Therefore the Scottish population can expect to live shorter lives than the rest of the UK by more a year. Table 5 shows that Scottish LE is the lowest of its UK counterparts when comparing the current 2012-14 based figures.

Table 5. Life Expectancy at Birth (in years) by UK Area of Residence, (2012-14 based)

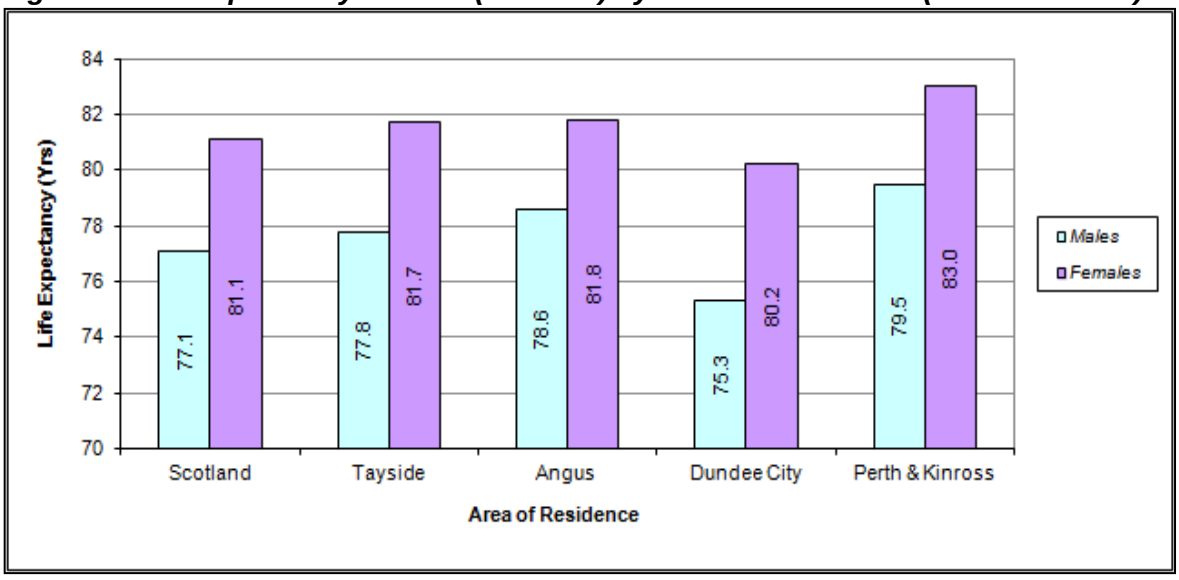
Area of Residence	Males *(Years)*	Females *(Years)*
UK (All)	79.07	82.81
England	79.35	83.05
Wales	78.40	82.29
Northern Ireland	78.25	82.28
Scotland	77.05	81.06

Source: National Life Tables, United Kingdom, 2012-2014, Office of National Statistics (January 2016)

The continued increases in life expectancy can be attributed to the improvements in mortality at older age. Scotland's lower life expectancy can be associated with higher levels of alcohol consumption, a greater smoking prevalence and higher levels of cardiovascular diseases in Scotland compared to the other constituent countries of the UK[8].

The current life expectancy at birth for Tayside males is 77.8 years and 81.7 years for females (2012-2014 based). These figures are very slightly higher than the Scottish life expectancy estimates for both genders as summarised in Figure 5, which displays the life expectancy for Tayside males and females by local authority.

Figure 5. Life Expectancy at Birth (in Years) by Area of Residence (2012-14 based)



Source: Life Expectancy, National Records of Scotland (NRS) and National Statistics (January 2016)

There are variations in life expectancy across Tayside's local authority areas:

- Both males and females in Angus and Perth & Kinross have higher life expectancies than the Scottish average. The latter displaying the highest life expectancy of the three local Tayside areas.
- Dundee City males and females have the lowest life expectancy compared with both its Tayside counterparts and the Scottish estimates.
- Dundee City males are expected to live 4.2 years less than those in Perth and Kinross, with a corresponding difference of 2.8 years less in females.

Table 6 summarises the latest available LE figures by deprivation and displays the variations in the life expectancy at birth for the most deprived (MD) areas and least deprived (LD) areas across Tayside three local areas. As expected those living in most deprived areas have a lower life expectation than those who live in more affluent areas.

[8] *Office of National Statistics: Scottish Health Survey - UK comparisons: The Scottish Government, 2010.*

Table 6. Expectation of Life at Birth for Tayside Council Area by Split Level of Deprivation, for the period 2009-2013

Deprivation MD = most deprived 15% LD = least deprived 85%	**Expectation of Life at Birth**	
	Male *(Years)*	**Female** *(Years)*
Angus LD	79.2	81.6
Angus MD	73.6	78.7
Angus (2009-2013)	**78.3**	**81.2**
Dundee City LD	75.4	80.2
Dundee City MD	69.9	75.3
Dundee City (2009-2013)	**74.6**	**79.4**
Perth & Kinross LD	79.9	83.0
Perth & Kinross MD	74.8	79.9
Perth & Kinross (2009 - 2013)	**79.2**	**82.6**

Source: Life Expectancy by Deprivation (2009-2013), National Records of Scotland [NRS}; (January 2016)

Adult Overseas Nationals Registered Within Tayside

National Insurance Number (NINo)[9] Allocations to Adult Overseas Nationals entering the UK statistics are based on adult overseas (non-UK) nationals registering for a new National Insurance number for the purposes of work, benefits or tax credits and provide an indication of the number of new arrivals coming to a particular area.

In 2015/16, the majority of overseas nationals within Tayside were registered within Perth & Kinross, accounting for 51.9% *(N=2,774)* of Tayside overseas national population. In comparison, the overseas national individuals in Dundee City accounted for 24.8% *(N=1,352)* and in Angus 24.3% *(N=1,327),* of Tayside's total overseas nationals population.

The 2015/16 proportions of Tayside's three local authorities NINo allocations in terms of nationality recorded in that year shows that the majority of non-UK nationals registered are from Romania (29.7% of the total Tayside NINo allocations[10]). There is some variation between the three Tayside local authority areas in terms of country of origin of their NINo allocations. Within both Angus and Perth & Kinross, the majority of their allocations were from Romania, 47.9% *(N=636)* and 30.6% *(N=851)* of their total NINo allocations respectively. In comparison with Dundee's allocations, those of Romanian origin represented only 9.8% *(N=227)* of their non-UK population; the majority of the Dundee allocations were from Poland, representing 19.9% *(N=270)* of the Dundee allocations.

Urban Rural Classification

The 'Scottish Government Urban Rural Classification[11] provides a standard definition of rural areas across Scotland, distinguishing between urban, rural and remote areas across Scotland.

Across Tayside during 2013/14, the largest proportion of the population (38.3%) resided within 'large urban areas' with a further 26.6% living within 'other urban areas'. In comparison, 5.2% of the Tayside population were living in 'remote rural areas', with a further 19.1% residing in 'accessible rural areas'.

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[9] *Produced by the Department for Work and Pensions (DWP) Statistics*

[10] *Collective total of Tayside's three local authority areas. A Tayside figure is not available from DWP.*

[11] ***Large Urban Area**: Settlements of over 125,000 people. **Other Urban Areas**: Settlements of 10,000 to 125,000 people. **Remote Rural: Areas**: Settlements of less than 3,000 people and with a drive time of between 30 and 60 minutes to a settlement of 10,000 or more. **Accessible Rural**: Settlements of less than 3,000 people and within 30 minutes drive of a settlement of 10,000 or more.*

Within Dundee, 99.5% of the population were classified as living in 'large urban areas', while across Angus the majority of the population (53.6%) resided within 'other urban areas'. In comparison, in Perth & Kinross the majority of the population comprised of a combination of both those living in 'Other Urban Areas' and 'Accessible Rural', accounting for 31.9% and 32.6% of the Perth & Kinross population respectively.

Homelessness

Under the Homeless Persons legislation, housing authorities have statutory duties to assist those who are homeless or threatened with homelessness, which include providing accommodation in certain circumstances. Local authorities are required to assess each application.

During 2014/15, of Tayside's three local authority areas, Dundee City had 1,102 applications under the Homeless Person's Legislation, compared with Angus (597 applications) and Perth & Kinross (680 applications).

Within Tayside over the last eight years there has been a decline in the number of homeless applications. Between 2013/14 and 2014/15, Perth and Kinross recorded the greatest decrease in the number of homeless applications, a reduction of 8.4%. In comparison, Angus and Dundee have showed a reduction to a lesser degree, a decrease in the number of applications by 3.2% and 0.3% respectively. This is a substantial slowing of the rate of reduction from homeless applications compared to previous years (2012/13 reduction in Perth and Kinross was 34%for example).

2.0 Health protection: National and local priorities

2.1 National priorities

In the Chief Medical Officer for Scotland annual report for 2012 key challenges and priorities in relation to communicable diseases were identified and these have remained largely unchanged:

- ***Gastro intestinal and foodborne infections:*** *The global food industry maintains complex transnational foods chains which are hard to regulate and can contribute to local and international incidents and food fraud and crime. Campylobacter is the most common form of foodborne illness in Scotland (a situation which is similar to the UK and most of the developed world). Out of an estimated total of around one million cases of foodborne disease each year in the UK, Campylobacter is considered to be responsible for around 460,000 cases, 22,000 hospitalisations and 110 deaths, and 80% of infections are estimated to be foodborne. Recent research published in 2015 found that 73% of fresh whole chickens on retail sale in the UK are contaminated with Campylobacter.* *http://www.foodstandards.gov.scot/food-safety-standards/foodborne-illness/campylobacter*

- ***Travel and international health:*** *In 2014 there were an estimated 3.9 million journeys made by travellers from Scotland, an increase of 6% from 2013. Imported and emerging gastrointestinal, viral and vector borne infections, such as dengue and chikungunya, present an ever increasing burden and threat. The global scale of situations such as the Ebola outbreak at the end of 2013 and currently Zika virus, illustrate this.*

- ***Environmental factors:*** *Environmental factors are estimated to account for 14% of the UK's disease burden and 23% of worldwide deaths (ref. WHO 2009. Country profiles of the burden of disease – United Kingdom*

http://www.who.int/quantifying_ehimpacts/national/countryprofile/unitedkingdom.pdf, WHO 2006. Preventing Disease Through Healthy Environments http://www.who.int/quantifying_ehimpacts/publications/preventingdisease.pdf) The main environmental concern for Tayside is the risk to health from air pollution. Traffic is a major contributor to air pollution and data from 2014 show that in Tayside there were 3 sites in Dundee and 2 sites in Perth where air pollution levels exceeded the UK Air Quality Objectives (Ref.SG 2014. Scottish Air Quality Databases, http://www.scottishairquality.co.uk/assets/documents/technical%20reports/SAQD_annual_report_2014_Issue_1.pdf). The Health Protection Team are collaborating with Dundee City Council, and Perth & Kinross Council in support of the implementation of the national strategy to improve air quality (Ref. SG, 2015 Cleaner Air for Scotland – Road to a Healthier Future http://www.scottishairquality.co.uk/news/index?id=513).There are both national (Ref. SG. Air Quality in Scotland http://cleartheair.scottishairquality.co.uk/) and local initiatives to improve air quality and encourage active transport (Ref. DCC, 2011. Air Quality Action Plan (AQAP) for NO_2 and PM_{10} https://www.dundeecity.gov.uk/air-quality/air-quality-dundee-background; Perth and Kinross, 2009. Action on Air http://www.pkcairquality.org.uk/action-on-air/).

- ***Emerging and re-emerging infections:*** Zoonoses *(infectious diseases that can be transmitted from animal to humans)**,** account for 61% of all human infections including established infections such as* Campylobacter, Salmonella*,* Cryptosporidia, *VTEC/*Ecoli *O157; and, potentially emerging problems such as Hepatitis E, Hantavirus, Lyme disease, Avian Influenza and rabies;* Antimicrobial resistance *such as carbapenemase producing Enterobacteriaceae is recognised by the European Centre for Disease Control as a significant threat to public health in Europe;* Epidemic infections - *2012 saw the re-emergence of pertussis infection, plus, the largest outbreak Scotland has ever seen of Legionnaires disease;* Pandemic infections - *in 2012 a further 32 cases and 20 deaths brought the global total of cases of avian influenza A(H5N1) to 610 with 360 deaths.*

- ***Resilience and emergency preparedness:*** *Scotland needs to predict and respond to established and emerging global health threats posed by infectious diseases, environmental hazards, natural disasters and bioterrorism. Delivery of effective Health Protection services requires development of the workforce, standards, protocols and governance structures to maintain quality, and, preparation for major disruptive challenges involves clear emergency planning. Tayside agencies have been collaborating in the review and exercising of Pandemic Flu Plans. The response procedures for flu provide the basis for responding to a range of other emerging diseases such as MERS CoV, Ebola and Zika virus.*

Trends and changes in relation to vaccine preventable diseases, Hepatitis C and HIV, Tuberculosis, Legionnaires' disease, Healthcare Associated Infection and Antimicrobial resistance are also highlighted as priorities.

Recommendations from the CMO report in relation to control of communicable diseases were:

- *To become technologically smarter particularly around surveillance (e.g. TB, Anti-Microbial Resistance), communication of risk (e.g. Travel, Lyme disease, Legionella) and in linking case and outbreak management to national guidance and quality assurance. This will involve close integration of human and animal information sources and expertise, within the broader context of trade, travel and the environment.*

- *To develop and implement national programmes and multiagency action plans such as the extended immunisation programme, the Sexual Health and Blood Borne Virus Framework, A TB Action Plan for Scotland, the VTEC/E Coli 0157 Action Plan, and the Scottish Antimicrobial Action Plan.*

- *To maintain the capacity and resilience to deliver quality assured services for Scotland that are flexible enough to deal with all kinds of disruptive challenges, from infectious disease outbreaks to terrorist attacks or flooding. This requires the development of innovative approaches which promote priority setting, linkages between policy areas, effective governance, quality assurance and collaborative working between statutory agencies, the private sector, the voluntary sector and communities.*

Source: *Annual Report of the Chief medical officer 2012-Population Health and Improvement Science. Dec 2013*
http://www.scotland.gov.uk/Publications/2013/12/7881/6

2.2 Specific features of areas of Tayside associated with health protection risk

The geography of Tayside results in certain risks associated with particular features of the local area. The community risk register lists a number of health risks for which a response is required across the Category 1 responders in Tayside e.g. Pandemic Influenza. Tayside also hosts a number of (Control of Major Accident Hazards) COMAH sites and major pipelines (Shell and BP). Plans are in place to address these risks, but these plans require regular review to take account of learning from actual incidents and exercises.

Local authorities have a major role in health protection mainly discharged through their environmental health (EH) services. Within each of the three Councils there is a common set of core functions carried out by all the EH services. However, there can be significant variations between Councils in the range of activities carried out by their EH services for the following reasons:

- Many other Council functions have an underlying health protection purpose and as a result may be allocated to the EH function in one Council but not in another.
- Specific features within the different local authority areas may produce particular demands (e.g. major facilities or events).
- The demands and expectations within different communities also shape EH service delivery.

These factors are outlined below for each Council area:

Angus

There are many rural communities in Angus including a significant population of migrant workers, in common with Perth & Kinross. The standard of residential accommodation for these workers has been a concern especially where caravans are used. The coastal location of Angus carries particular significance for health protection because of its harbour at Montrose. Shell and BP Onshore Pipeline Systems are located in Angus.

Again in common with Perth & Kinross, Angus regularly hosts a number of major outdoor events, including 'The Open' golf tournament and Angus has a thriving tourist industry. Campsites throughout the area may be associated with, for example, *E.coli* O157 risk from the use of livestock fields.

Other health protection risks and challenges relate to:

- The potential for chemical and biological contamination of private water supplies – affecting permanent and temporary residents of the area
- Montrose harbour – port health issues e.g. ammonium sulphate storage
- The health of migrant workers – the issues are described extensively in publications relating to this area
- Agricultural and rural exposure to environmental pathogens resulting in a range of infectious diseases e.g., *Cryptosporidium*, *E.coli* O157, Lyme disease
- Wastewater Treatment Works at Hatton, including pumping stations
- Local hazards and nuisances e.g. large populations of gulls in urban areas
- A large number of individual wind turbines with potential nuisance/health effects
- A number of premises using biomass boilers which, although contributing greatly towards reducing carbon dioxide emissions, can also produce particulate matter as a product of combustion, if insufficient filtration incorporated into plant design

Dundee

Dundee is a wholly urban area with a relatively high population density and high levels of deprivation. It has the biggest percentage of flatted property per head of population in Scotland, which results in a wide range of environmental health problems requiring resolution.

The city's industrial legacy means that there are many former industrial sites zoned for development. Screening for contaminated land with a view to remediation is a major Environmental Health function.

Dundee, like a number of other local authorities has a range of measures in place to improve its air quality since it has air quality targets for PM_{10} and NO_2 which are not being met in the city centre and around major arterial routes. The city is listed by Audit Scotland as one of fourteen Scottish Councils which have air quality problems.

Dundee City Council is the Port Authority for the city's seaport and Riverside Airport, with both facilities accommodating international traffic.

Dundee's large number of temporary residents includes students from across the UK and international locations. Infectious diseases common to other areas of the world can therefore present in temporary residents. A good example of this is the small but significant number of cases of Tuberculosis infection that occur amongst temporary residents.

Being a regional centre it has a relatively high number of workplaces and commercial activities requiring regulation.

Dundee has one lower tier Control of Major Accident Hazards (COMAH) site.

Perth & Kinross

There are many rural communities in Perth & Kinross. The working and residential environments are associated with an increased exposure to farm and wild animals, soil and untreated water sources. Agricultural and rural exposure to environmental pathogens may result in a range of infectious diseases e.g., *Cryptosporidium*, *E.coli* O157, Lyme disease.

Amongst the agricultural workers of Perth & Kinross there are a large number of migrant workers and travellers. The specific health needs of these groups are well described in the scientific literature. In relation to health protection, specific health needs result from the infection risk associated with poor standards of accommodation, transient use of primary health care services and imported infections.

Potential exists for the chemical and biological contamination of private water supplies affecting permanent and temporary residents of the area. An estimated 7,175 people are exposed annually to the risk of infectious diseases including *E.coli* O157 and *Cryptosporidium* resulting from private water sources.

There are a number of COMAH sites throughout Perth & Kinross. Port health related issues are relevant to Perth harbour.

The thriving tourist industry of Perth & Kinross results in many visitors to the area. These visitors may develop infections typically associated with holiday populations e.g. Norovirus. Perth & Kinross hosts the largest annual music festival in Scotland, T in the Park, with campsite facilities providing accommodation to an estimated 65,000 people over four days. Potential risks at T in the Park include outbreaks of communicable disease and are well described in the planning documented for this event. Other large commercial gatherings include the Perth Game Fair and Rewind Festival at Scone Palace.

2.3 Health protection priorities and activities in Tayside

NHS Tayside's health protection activities

The broad functions of the NHS Tayside Health Protection Team are as follows:

- Surveillance, prevention and control of communicable diseases and environmental hazards;
- Provision of specialist advice and support to primary care, hospitals, and other relevant organisations such as care homes and nurseries, to support effective delivery of health protection locally;
- Investigation and management of a full range of health protection incidents (including single cases and outbreaks of diseases such as meningococcal meningitis, tuberculosis, food poisoning and environmental release of chemical, biological or radiological agents);
- Co-ordinating and contributing to planned, preventive programmes including routine and selective immunisations, emergency and resilience planning, and public information and education initiatives;
- The conduct of clinical audit, research, teaching and contributing to and undertaking continuous professional development relating to health protection.

Topic areas include:

- Immunisation and vaccine preventable diseases;
- Blood borne viruses;
- Respiratory infections (including TB and pandemic influenza planning);
- Gastrointestinal and waterborne infections;
- Infection control in non-NHS community settings;
- Port health;
- Environmental health;
- Resilience Planning

Local authority activities

The main areas of local health protection activities carried out by Environmental Health and other professionals within local authorities are outlined below. Many are requirements of statute, in order to protect the health of individuals living in working in or visiting our communities.

- Effective enforcement of housing, (including caravans) public health and pollution control legislation to reduce the effects on health of poor housing standards,

statutory nuisances poor air quality, unwholesome drinking water, contaminated recreational waters or other hazards

- Dealing with pest infestations, including the provision of pest control services
- Controlling environmental noise/ antisocial behaviour noise
- Identification, investigation and control of contaminated land
- Identification, investigation and action to reduce air pollution
- Pandemic flu operational planning particularly in the context of business continuity in respect of the maintenance of critical Local Authority services
- Risk assessment, sampling and improvement of private water supplies to protect users from the risk of waterborne infections or diseases
- Effective enforcement of health and safety at work legislation to protect workers and those affected by work activities
- Effective enforcement of food safety legislation using inspection and sampling programmes to protect consumers from unsafe food supplies
- Inspections of ships and aircraft to protect crew and passengers, as well as potential communicable disease affecting local population
- Effective response to any notified diseases or food poisoning cases to identify and limit the spread of infection where necessary
- Minimising the risk of exposure to environmental incivilities such as dog fouling, illicit tipping and graffiti
- Minimising the risk of environmental tobacco smoke/ secondary exposure through inspection and the enforcement of smoke free legislation
- Regulation of sales of under age products e.g. tobacco, alcohol
- Ensuring that tobacco and smoking related products are not displayed openly in retail premises
- Regulation of alcohol sales through licensing standards legislation – including enforcement, education and awareness raising work
- Domestic refuse collection and recycling services
- Disposal of human remains where no relatives, or other persons, are in a position to do so.

2.4 Local priorities for health protection work in Tayside for 2017-19

Priority area	Actions
Progress recommendations from the Health Protection Team away day in January 2016 to improve and develop longer term strategic team vision, cohesion and priorities.	Agree and implement shared team: • Vision statement • Workplan • Performance management framework • New staff induction • Mandatory training
Share learning from leisure pool incidents to reduce swimming pool related infection and improve public and pool operator understanding of roles, responsibilities and risks	Establish swimming pool convention
Implementation of Cleaner Air for Scotland Strategy in Tayside	Work with Local Authorities to promote active transport and reduce air pollution across Tayside.
BBV focus on prevention	Work with BBV MCN on development of key emerging prevention issues including: • PrEP • Foil provision • Chemsex • People involved in commercial sexual activity
Migrant health	Ascertain as clear a picture as possible of the local migrant population and their priorities and needs in relation to health protection. Consider and explore specific service developments to address these areas.
Scottish Health Protection Network GIZ priorities	Implement local actions emerging from SHPN GIZ sub-groups relating to: • Campylobacter • Giardia • VTEC • Hepatitis E virus • Lyme disease
On-going resilience for Health Protection Team	Contribute to local and national discussion regarding Shared Services Review for Public Health Explore development of joint out of hours CPH/M rota with NHS Fife
Reviewing and revising existing protocols and emergency plans in accordance with the schedule at Appendix B	See Appendix B

3.0 Health Protection Resources and Operational Arrangements

3.1 NHS Tayside Health Protection Team staffing

The NHS Tayside health protection function is continuously operational 24/7. In hours (Monday to Friday, 9am to 5pm) a small multidisciplinary team operates to deliver the full range of services. Out of hours the service is covered by an on call team where a single Consultant in Public Health / Medicine (CPH/M) is always available on call and at times there is additionally a Speciality Registrar on call. A voluntary out of hours agreement is informally in place with a small number of nursing and administrative staff.

Table 1 Monday to Friday (In Hours) Health Protection Team

Designation	**WTE**
Consultants in Public Health / Medicine (Health Protection)	2.4
Specialist Nurses (Health Protection)	3.0
Personal Assistants	2
Surveillance/Notification Assistants	1.5

The Consultants in Public Health / Medicine (Health Protection) are supported by 5 additional generic Consultants in Public Health / Medicine for the purposes of 24/7 on call provision.

Table 2 Out of Hours Health Protection Team

Designation	**Periods covered**
Consultants in Public Health / Medicine	24/7 evenings and weekends
Speciality Registrars in Public Health	Evenings & weekends for 3 days per week only
Specialist Nurses (Health Protection)	None
Personal Assistants	None

A Consultant in Public Health Pharmacy provides *ad hoc* input on health protection issues when required. The Health Protection Team also benefits from access to the Public Health Officer Team who provide research, evaluation and database management expertise.

NHS Tayside Competent Persons

Eight Consultants in Public Health / Medicine are designated as NHS Competent Persons under the provisions of the Public Health etc (Scotland) Act 2008.

3.2 Roles and responsibilities

Consultants in Public Health / Medicine (CPH/M)

The CPH/M role is:

- *Surveillance*: Monitoring the health of the population and the hazards and exposures affecting it
- *Investigation*: Investigating why and how people fall ill because of exposure to hazards and what can be done to prevent this
- *Risk assessment*: Estimating the probability of the health of a community being damaged from exposure to a hazard
- *Risk management*: Putting in measures that reduce the risk of exposure to hazards and the impact they have on health
- *Risk communication:* Informing the public and other stakeholders about the risks to their health and what the individually or collectively can do to reduce these.

- *Co-ordination:* Leading and contributing to time-limited and ongoing planned, proactive programmes and activities, including statutory services, to protect population health.

The CsPH/M provide public health advice to other professionals, to patients and relatives, staff and the public from an NHS base, home or other agency site. A CPH/M leads the management and coordination of the public health incident response, in liaison with local NHS senior management, and others e.g. other NHS Board areas, Health Protection Scotland, Scottish Government and other national agencies. A CPH/M convenes an incident/outbreak management team on the basis of clinical judgement in order to ensure protection of the public health. CsPH/M participate in local emergency planning arrangements including Regional Resilience Partnerships (RRP) and Scientific and Technical Advisory cell (STAC) arrangements when required.

Specialist Nurses (Health Protection)

The Specialist Nurses also provide public health advice to a wide range of other professionals, to patients and relatives, staff and the public from an NHS base, home or other agency. This includes on health protection issues including communicable diseases, infection control, immunisation and environmental health, implementing the public health response in relation to health protection incidents and leading strategically on the control of communicable disease through agreed projects and in relation to broad policy areas in Tayside.

The Specialist Nurses take a lead role in the initial investigation of confirmed, probable and possible single cases of communicable disease and infection (e.g. meningococcal disease, measles) and in the local control of specific outbreaks (i.e. gastro intestinal infections in care homes). The Specialist Nurses also take a lead role in providing advice and information and training to NHS professionals, local authority, private and voluntary organisations, educational establishments and the general public on health protection issues including communicable disease, environmental health, infection control and immunisation. The Specialist Nurses are members of and participate in regional and national health protection networks/groups.

Surveillance Notification Assistants

The Surveillance Notification Assistants receive verbal, written and statutory notifications of infectious diseases, record these in appropriate databases, and produce local returns on notifications through national systems for monitoring of disease trends.

Health Protection Administrative and Clerical Staff

The health protection administrative and clerical members of staff provide a comprehensive administrative and secretarial support service to CsPH/M and other professional staff within the Directorate of Public Health. This includes assisting staff in managing their working day and acting as the identified contact point for all callers to the office, by telephone or in person, dealing with non-clinical enquiries, resolving difficulties and advising on the proper channels of communication to ensure that they minimise inappropriate interruptions whilst maintaining the continuity of the needs of staff and outside agencies.

3.3 Tayside Local Authorities' staffing

Angus Council

Angus Council has 15.2 whole time equivalent (WTE) competent persons as designated under the Public Health etc (Scotland) Act 2008. In addition 1.6 (WTE) food safety officers, two technical officers, a Dog Warden and an Animal Health Inspector contribute to public health protection functions.

Dundee City Council

The planned provisional staffing complement for the period of this Health Protection Plan includes 17.3 WTE Environmental Health Officers (EHOs) including 3 managers (meeting the definition of competent persons under the Public Health etc (Scotland) Act 2008).

There are a further 21 WTE staff who contribute to public health protection functions, including; Food Safety Officers, Pest/Animal Control Technicians and Licensing Standards Officers.

Perth & Kinross Council

Perth and Kinross has 9.0 WTE competent persons as designated under the Public Health etc. (Scotland) Act 2008. In addition there are a further 22.0 WTE officers who contribute to public health protection functions.

3.4 Tayside Scientific Services

This laboratory is part of Dundee City Council and provides comprehensive scientific services to the Tayside Local Authorities, private business and government agencies. It does not interface with the general public, but provides a support service to local authority functions such as Environmental Health and Trading Standards. Their services include analysis and examination of air quality, contaminated land, and microbiological and chemical examination of food and water supplies. The work of the lab contributes greatly to the work of the Local Authorities within Tayside NHS area both in day-to-day terms and in outbreak or major incident situations.

3.5 Tayside Local Authorities Out of Hours Arrangements

Each local authority has an out of hours facility, which holds contact details for key staff. This information is held by:

- NHS Tayside Health Protection Team
- Emergency Planning- contact lists are kept by all senior officials
- Food Standards Agency- Food Alert Contact Team

In only one area of Tayside are officers on a formal on-call rota. In the other two areas, the contact list system relies on officers identified on the list being available if contacted. To facilitate availability, contact lists contain the names of a number of officers for each local authority area.

3.6 Tayside staffing for delivery of the health protection function

Covering CPH/M total 24/7 availability for on call

In recent years the CPH/M on call availability has been variable as the rota has been subject to periodic changes in total generic CPH/M availability. At any one time the total availability for on call can vary from that expected in line with occurring vacancies and absence.

Employing body	Designation	WTE			
		2010-12	2012-14	2014-16	2017-19
NHS Tayside	CPH/M total generic availability for 24/7 on-call	6.7	6.7	7.3	7.5
	Specialist nurses (health protection)	3	3	3	3
Angus Council	Environmental health staff (all grades)	30	28	TBC 24-28 expected	21 (Not WTE)
Dundee City Council	Environmental health staff (all grades)	47	40	40	38.3
Perth and Kinross Council	Environmental health staff (all grades)	37.9	31.9	31.0	31.0

3.7 Maintaining knowledge and skills

NHS Tayside

All consultant staff are required to maintain their skills and professional registration, and to record continuing professional development (CPD) activities and undergo annual appraisal, in keeping with current General Medical Council (GMC) and UK Public Health Register (UKPHR) guidelines.

Speciality Registrars are required to undergo annual assessment of progress with training in order to ensure that skills are being developed appropriately.

The Specialist Nurses (Health Protection) are required to maintain their skills and professional registration and to record continuing professional development (CPD) activities and undergo annual appraisal, in keeping with the current Nursing and Midwifery Council (NMC) guidelines.

Local Authorities

Local Authority professionals all have an Employee Review and Development process, or equivalent, on an annual basis. There is ongoing training ensuring that staff have the necessary skills and competencies on a wide range of public health and environment matters, including health protection. In addition, officers regularly attend national Liaison Groups on matters of food, health & safety, pollution, public health, housing, smoking and port health.

3.8 Capacity and resilience

Capacity can be defined as having sufficient resources and capability in an organisation with responsibility for Health Protection to enable them to discharge their remit, including the response to increasing pressures on their services[12].

Resilience is about the sustainability of a response over a period of time (e.g. 48 hours)[12]. For example a complex disease outbreak may require the core investigatory team to work intensively for long hours over many days. To cope with this pressure therefore it may be necessary to operate a shift or rota system. Sufficient capacity to do so is therefore required. This means that staff called in from other functions to support the response will have to be trained and prepared in advance for this role.

Maintaining and building capacity and resilience depends on adequate resources being available. A decline in core health protection resources within any party to this plan could affect the overall capacity within Tayside to react effectively to incidents. It is essential that all parties maintain and develop plans to ensure that there is sufficient health protection capacity, including the ability to effectively react to incidents. This includes maintaining and reviewing existing business continuity plans.

3.9 Information Technology and Communications Technology

NHS Tayside

NHS Tayside uses the following systems to support the health protection function. All these systems are available during office hours, and many can be accessed on call and can be used in an outbreak or incident.

NHS Tayside Information Technology and communications technology	Use
BT (British Telecom) landline, mobile phones, on call pagers and 3 sets of teleconferencing equipment	Day-to-day (including on call) communications and teleconferencing
Access to video-conferencing facilities off-site	Video-conferencing including teaching
Microsoft packages including Word, Excel, used on desktop and laptop computers	Communications, data collection including outbreak management, filing, presentations. Laptops (with email, internet)
Internet	Investigations, communications, research.
CHI (Community Health Index)	Patient demographic data
HPZone	Notifications of Infectious Diseases reported to Health Protection Scotland
Disease notification local database	Record of notifications
ECOSS (Electronic Communication of Surveillance in Scotland)	Reporting mechanism for notifiable and reportable organisms
ESMI (Enhanced Surveillance of Mycobacterial Infections in Scotland)	National surveillance database for TB
Information board	Can be written on and used in an incident or as a teaching or presentation facility.
Television Mobile phones including MTPAS	Enables staff to keep up-to-date with media messages and communications during an incident or outbreak.

IT (Information Technology) and Communications Technology available to Local Authorities in Tayside

[12] Definitions sourced from Health Protection Scotland (personal communication, March 2010)

Each Local Authority has access to the following:

1. Emergency Planning centres and facilities
2. Geographical Information System (GIS)
3. Civica IT system linked to Address Gazeteer. The capacity of this system provides:
    a. database for all premises within EH jurisdiction
    b. handling of all service requests including communicable diseases
    c. planning of inspection programmes
    d. sampling database (e.g. food samples)
    e. production of data reports
    f. mail merge
    g. multi access points in Council premises including emergency planning centre
4. All staff equipped with mobile phones and cameras
5. All staff equipped with PC and internet access

4.0 Health Protection: planning infrastructure

Joint plans for the Tayside local resilience partnership and regional resilience grouping are held on Scriptstore: http://civilcontingencies.dundeecity.gov.uk/

Parts of this site are password protected.

4.1 Health Protection Plans

A number of health protection plans have been produced for Tayside (Appendix B). These require to be regularly updated and exercised.

4.2 Local authority health protection plans

Single Outcome Agreements and the service planning process

The Scottish Government and local government share an ambition to see Scotland's public services working together with private and voluntary sector partners, to improve the quality of life and opportunities in life for people across Scotland.

This shared ambition is pursued through Single Outcome Agreements in a drive towards better outcomes. These agreements between the Scottish Government, local authorities and Community Planning Partnerships (CPPs) set out how each will work in the future towards improving outcomes for the local people in a way that reflects local circumstances and priorities, within the context of the Government's National Outcomes and Purpose.

The Scottish Government's priorities, to be reflected in SOAs, can be summarised as follows:

- Wealthier and Fairer Scotland
- Healthier Scotland
- Safe and Stronger Scotland
- Smarter Scotland
- A Greener Scotland

In Tayside each Council has signed Single Outcome Agreements (SOAs). In the case of Dundee City Council this was made through the vehicle of the multi agency Dundee

Partnership. The SOA for Dundee describes how Dundee City Council, Scottish Enterprise Tayside, NHS Tayside, Tayside Police, academic institutions and representatives of the private, community and voluntary sectors have all agreed to work together to make Dundee a better place.

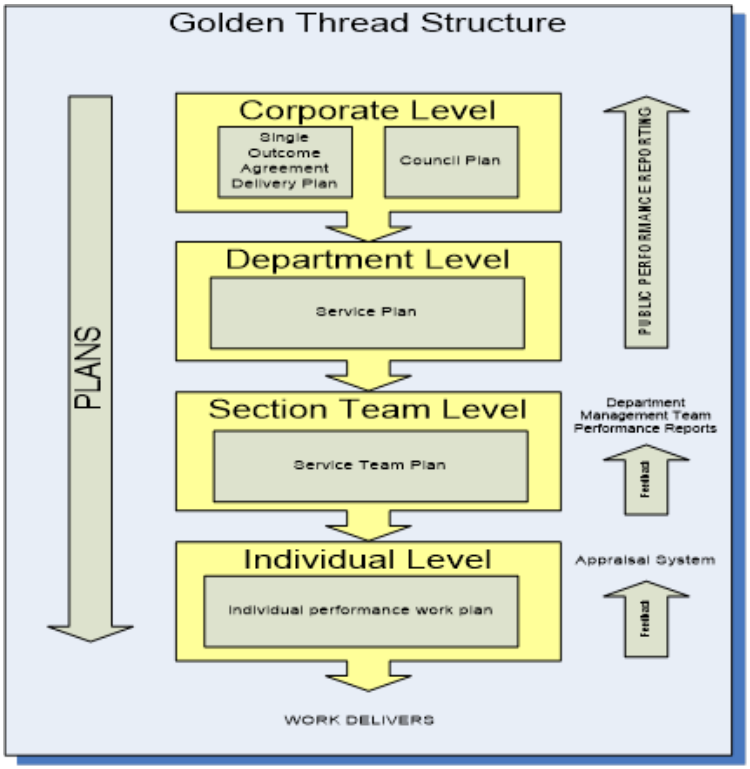
Perth and Kinross Council's Planning Partnership (NHS Tayside, Perth College, Perth and Kinross Association of Voluntary Organisations, Perth and Kinross Council, Police Scotland, Scottish Enterprise and Scottish Fire and Rescue Service) approved the Community Plan / Single Outcome Agreement 2013 – 2023 in June 2013 setting five strategic objectives:

- Giving every child the best start in life
- Developing educated, responsible and informed citizens
- Promoting a prosperous, inclusive and sustainable economy
- Supporting people to lead independent, healthy and active lives
- Creating a safe and sustainable place for future generations

Each Council also produces Council Plans linked to SOAs. Individual service plans link with these higher-level strategic objectives providing a clear link between these and service delivery. This is illustrated in Figure 6.

Local authorities have a wide range of plans which connect with health protection. The strongest links are contained in the respective departmental service delivery plans for environmental health.

Figure 6. Local Authority Planning Links



4.3 Joint working arrangements

Gastro-Intestinal Liaison Group

This Group has a remit to ensure that the main stakeholders responsible for health protection take a consistent approach in the reporting, investigation, monitoring and control of notifiable infectious disease across Tayside. Membership includes NHS Tayside, the three Local Authorities and Tayside Scientific Services.

Joint Tayside and Fife Water Group

This group has a remit to ensure that NHS Tayside working in partnership with other statutory organisations fulfils its responsibility to take appropriate action in protecting and informing the public on the risks associated with public and private water supplies and blue-green algae (BGA) (Cyanobacteria). Membership includes NHS Tayside, the three Local Authorities, SEPA and Scottish Water. The group produces a monitoring and action plan for BGA on an annual basis setting out the arrangements in place to control the risks associated with BGA in water supplies.

Communicable Diseases - National Pregnancy Screening Programme

The programme offers screening to all pregnant women for HIV, rubella, syphilis and hepatitis B. Screening, diagnosis and treatment, and follow up are required to be in line with NHS QIS Pregnancy and Newborn Screening Clinical Standards (October 2005) and relevant Managed Clinical Network (MCN) standards.

Women's Health/Microbiology Liaison Group

A multidisciplinary group with representation from midwifery, obstetrics, microbiology, virology and public health meet regularly to discuss a range of issues relating to communicable diseases in pregnancy. The group also discusses issues on pregnancy screening for communicable diseases, when relevant.

Other groups that support and promote the work of health protection include *Tayside Immunisation Steering Group,* the NHS Tayside Seasonal Influenza Vaccination Strategic Governance Group,

Tayside Blood Borne Virus and Sexual Health Managed Care Network (BBVSHMCN) http://www.bbvmcntayside.scot.nhs.uk/

This is a multi agency accredited managed care network charged with implementing and monitoring delivery of the Scottish Sexual Health and BBV Framework 2011-15 (http://www.scotland.gov.uk/Publications/2011/08/24085708/0), the Hepatitis C Action Plan (http://www.scotland.gov.uk/Publications/2008/05/13103055/0) and the HIV Action plan (http://www.scotland.gov.uk/Resource/Doc/293178/0090440.pdf). Representation includes NHS Tayside, Voluntary Sector agencies, and Local Authorities. Subgroups take forward specific areas of work in relation to Prevention, Hepatitis, HIV, Sexual Health and Audit.

Tayside Immunisation Strategy Group

This group co-ordinates delivery in Tayside of all national vaccination programmes, involving NHS pharmacy, admin, finance, community and school nursing, in liaison with local education authorities.

5.0 Delivering the health protection function in Tayside 2014-2016

5.1 Notifiable diseases and organisms

Under the Public Health etc (Scotland) Act 2008 there is a list of diseases that registered medical practitioners have a statutory duty to notify to their public health department based on reasonable clinical suspicion. There is also a list of largely corresponding organisms that diagnostic laboratories also have a statutory duty to notify to public health. The Health Protection Team is now routinely using the national electronic HP Zone database system to manage all notifications. The table below shows all notifications whether directly from diagnostic laboratories or medical practitioners. Confirmed cases are all the notifications that were subsequently confirmed ie not all clinically notified cases are subsequently be confirmed by laboratory testing. The numbers apply to Tayside residents and refer to individual disease/organism notifications not individual people.

Table 1: Diseases / organism notified / confirmed to Public Health in 2014 – 2015 and 2015 – 2016

Disease / organism	01/04/2014 - 31/03/2015		01/04/2015 - 31/03/2016	
	Notifications	Confirmed	Notifications	Confirmed
Anthrax	<5	0	<5	0
Campylobacter	696	696	549	549
Clostridium difficile	8	8	11	11
Clostridium perfringens	0	0	<5	<5
E.coli / VTEC	35	29	15	15
Cryptosporidium	50	48	50	50
Diphtheria	<5	0	0	0
Giardia	11	11	17	17
Hepatitis A	<5	<5	<5	<5
Hepatitis B	39	39	28	28
Hepatitis E	20	20	27	27
iGAS	25	24	33	32
Influenza virus	13	12	10	10
Legionella	6	5	9	5
Listeria	0	0	<5	<5
Measles	<5	0	7	0
Meningococcal disease	10	<5	20	14
Mumps	54	20	137	91
Novel Coronavirus 2012	<5	0	<5	0
Paratyphoid	<5	<5	0	0
Pertussis	126	55	197	107
Psittacosis	<5	<5	<5	0
Rubella	0	0	<5	<5
Salmonella	50	50	59	59
Severe Acute Respiratory Syndrome (SARS)	<5	0	0	0

Shigella	6	5	6	5
Tuberculosis (all)	41	21	28	15
Typhoid	0	0	<5	0
West Nile fever	<5	<5	0	0
Yellow Fever	<5	<5	<5	<5

Source: HP Zone

5.2 Significant Incidents and Outbreaks 2014-2016

In any one year, a number of incidents and outbreaks occur. These vary in severity and in the degree to which new lessons are learned about how services can better respond in the future. Early lessons can be learned during ongoing 'hot reviews' as an incident develops or at the close of an incident. 'Hot reviews' enable matters to be dealt with, which do not require the in depth study needed to produce a report. Very often such lessons can be very valuable if captured fresh and often concern issues such as communication. This can be useful when final reporting of such incidents is delayed, for example due to outstanding legal considerations.

For the purpose of the JPHPP, significant incidents and outbreaks refer only to those for which an Incident Management Team (IMT) meeting was required. In 2014-2016 there were 13 such significant incidents or outbreaks managed through multiagency IMT led by the Health Protection Team. Of these, 3 involved respiratory pathogens and 7 involved gastrointestinal pathogens.

Respiratory and Vaccine-preventable Communicable Diseases

TB cases again required significant investigative and control effort, including close collaboration with other NHS and external services. This has been necessary to manage the risks associated with individual patients' non-adherence to treatment and where there has been potential for widespread transmission in specific healthcare and educational settings. In response to previous progress reports in relation to the TB Action Plan for Scotland regular multidisciplinary team meetings have been re-established and participation in a regional programme of retrospective review of TB case management ("TB Cohort Review") has commenced. Regular audit of contact tracing was put in place and discussions are on-going towards targeted preventative and case finding activity amongst higher risk populations.

Outbreaks of influenza in care homes have been much fewer and less impactful in 2014-2016 compared to the previous period. Those that have occurred have generally been well managed. Education and advice provided by Health Protection Team staff on visits and remotely has served to support care homes in managing the impact on their staff and resources. In turn this has limited the impact on primary care, hospitals, out of hours NHS, and social care services.

A rare instance of multiple cases of meningococcal infection being associated with a specific (non-healthcare) community setting necessitated a substantial and detailed health protection response. This involved co-ordinated communication and rapid provision for exposed individuals of protective antibiotics followed by two doses of a specific vaccine. Feedback from those affected and from other agencies which provided support was that the management had been effective and well co-ordinated. Useful lessons were learnt regarding preparedness and documenting of communications.

Communicable Gastro-intestinal Diseases

The NHS Tayside Health Protection Team and staff from the three local council environmental services work closely to investigate cases and outbreaks of infection associated with potentially food or water-borne organisms. The Health Protection Team provides ongoing surveillance of all reported cases of gastroenteritis. Surveillance includes identifying any possible links between cases, determining possible cause and quantifying incidence rates. Information gathered by Environmental Health Officers during interviews with cases of gastrointestinal disease forms a vital part of the epidemiological surveillance function.

During 2014-16 there were many outbreaks and cases of food and water borne infection. These peaked, as usual, in late summer and were frequently the result of infection imported from overseas when patients returned from their summer holidays. There were 12 outbreaks associated with more local transmission commonly through leisure and recreational settings.

Not reflected in the figures for notifiable diseases and organisms, however, are the many outbreaks of norovirus managed by the Health Protection Team. During 2014-2016 there were 37 such incidents. These are most commonly associated with community care settings and therefore, as with outbreaks of acute respiratory illness, do impact significantly on other health and social care services. Collaborative working between NHS Infection Control and Prevention services, Local Authorities, private providers and public health is essential to provide a full response to these risks. A member of the HPT has recently completed a Masters degree dissertation on the subject of managing such outbreaks involving a survey of local care homes and will be working to disseminate the findings.

E coli O157 and other Verotoxigenic E coli (VTEC) continue to feature in significant incidents. These pathogens are of particular public health importance because of their ease of transmission and the risk of serious lifelong morbidity from complications such as Haemolytic Uraemic syndrome (HUS). Throughout 2014-16, NHS Tayside and Local Authority colleagues will be working with other agencies to implement the VTEC Action Plan for Scotland.

Environmental incidents

2014-16 the HPT collaborated with Tayside local authorities in the investigation and management of 6 air pollution reports, 8 chemical issues, 3 cancer cluster enquiries, 3 waste related concerns, and 2 windfarm complaints. Throughout 2014-16 the HPT continued to review and provide advice on private and public water supply reports. In addition the HPT collaborated with partner agencies in the investigation of a number of cryptosporidium incidents including an outbreak associated with Arbroath Pool in Angus. Recommendations from the review of pool-related incidents will be taken forward through a Tayside Pool Convention to be held in 2016.

5.3 Healthcare associated Infections

NHS Tayside continues to carry out surveillance of healthcare associated infections in line with guidance from the Chief Medical Officer.

Emerging challenges include carbapenemase-producing enterobacteriaceae (CPE), especially amongst people who have received healthcare outside the UK.

Outbreaks of Multidrug resistant Acinetobacter have also been reported in Scotland, affecting in particular patients in HDU and ITU.

5.4 Vaccine preventable diseases and immunisation programmes

Childhood immunisation programme

Uptake rates for well-established vaccinations including diphtheria, tetanus, polio, pertussis, *Haemophilus influenza* type B, meningococcal group C and pneumococcal vaccines in children up to 24 months in NHS Tayside all continue to be above 95%, as does the uptake of MMR (Measles, Mumps, Rubella) by the age of 6 years. In addition to maintaining these attainments major changes in the national childhood vaccination programme introduced in 2013 have subsequently been fully implemented throughout 2014-16.

Meningococcal disease

In October 2015 Men B was introduced into the childhood programme for any child born after the 1st July 2015. Babies born on or after 1 May are being offered the vaccine as part of a one off catch-up campaign. All children will now receive Men B vaccine at 2, 4 and 12 months of age. Since 2009, there has been a year-on-year increase in the number of cases of Men W disease in the UK. Therefore in 2015/16, all young people aged 14-18 were offered Men ACWY vaccine, as well as new university entrants. This was part of a catch-up programme. Subsequently, all S3 pupils will be offered the Men ACWY vaccine as part of the routine childhood programme, in place of the Men C booster previously offered to the same age cohort.

Seasonal Influenza

An annual flu vaccine is offered annually from October onwards for everyone aged 65 and over, pregnant women, everyone with serious health condition, including those with obesity and all health care workers.

The established at risk groups include:

- At risk 6 months to 65 years
- Pregnant women
- Household contacts of people with compromised immune systems
- Over 65's
- Frontline health and social care workers

The nasal flu vaccine is also offered to all primary school children, as well as children aged 2-5 years who are not yet in primary school. Children in secondary school are not currently included in the programme. However, children of all ages with a serious health condition will still be offered the flu vaccine from 6 months of age.

Varicella Zoster vaccination

This is a new vaccination programme that will offer Varicella Zoster vaccine to people aged 70 to 79 years. The first phase of the campaign commenced in September 2013, targeting 70 and 79 year olds, and is being progressively rolled out to other age cohorts between age 70-79.

5.5 Planning for emergencies, including potential pandemic of influenza

NHS Tayside and Local Authority colleagues have been engaged in implementing the changes in Emergency Planning structures across Scotland. Tayside is an active member of the North of Scotland Regional Resilience Partnership alongside Grampian and Highlands and Island health board areas. The Local Resilience Partnership arrangements will continue to address local issues while regionally work is underway to review plans and share good practice

Embedding these new arrangements and exercising emergency response plans within the new structures was an important element of health protection work throughout 2014-2016

The Commonwealth Games in July/August 2014, with shooting events being hosted in Angus, and the Ryder Cup in Perth and Kinross in September 2014 provided an opportunity to strengthen multiagency planning and response. This was tested during a norovirus outbreak at the accommodation of the Games participants. Rapid identification of cases and improved hygiene procedures meant that none of the participants were affected by the virus.

T in the Park, held annually in Perthshire, is an event that has progressively increased in size in recent years (now in the region of 65,000 participants), with associated demands on health, local authority, police and other public services. The HPT will ensure systems are in place for early identification of outbreaks of communicable disease, working alongside local authority colleagues.

6.0 Mutual aid arrangements

A Mutual Aid Agreement (MAA) is defined as an agreement between organisations, within the same sectors and across boundaries, to provide assistance and additional resources during an emergency which may go beyond the resources of an individual organisation[13].

A MAA for the three Local Authorities is in place and was agreed through the Tayside Strategic Co-ordinating Group (Tayside SCG).

Joint working arrangements between the various agencies in Tayside are in place through the Tayside Local Resilience Planning structure. Police Scotland, Fire and Rescue Scotland, Scottish Ambulance Service and NHS Tayside have formal mutual aid arrangements within their sector of operation.

Regulation 3 of the Civil Contingencies Act (CCA) 2004 (Contingency Planning) (Scotland) Regulations 2005 provides that Category 1 responders, which have functions exercisable in a particular police area in Scotland, must co-operate with each other in connection with the performance of their duties under section 2(1) of the CCA.

7.0 Health protection: public involvement and stakeholder feedback

NHS Tayside has a long and established network of public partners who participate in a wide variety of engagement activities around development and improvement of NHS services. One of their key roles is their involvement in the Healthcare Associated Infection Public Partnership Group (PPGs) network. Members regularly meet with professionals around infection control issues and contribute to development of strategic and

[13] Definition sourced from Preparing Scotland (section 7)
http://www.scotland.gov.uk/Resource/Doc/94471/0022783.pdf

communication plans. PPGs also conduct hand hygiene and cleaning audits. They share information, for example on hand hygiene awareness-raising with the wider public at information stands both within and outwith NHS premises and also seek public views and opinions on services.

PPGs also contribute to discussion and debate on an individual issue basis.

Governance of the Joint Public Health Protection Plan is through the NHS Tayside Improvement and Quality Committee which has a Public Partnership Group representative as a member and as such is able to comment on their content.

The Health Protection Team invests on-going time in developing its intranet site, which includes the facility to raise health protection queries via a dedicated e-mail link. The public facing NHS Tayside internet site also makes all relevant content available and members of the public and other stakeholders are able to feedback comments to the HPT via these sites.

Through the NHS Tayside Public Partnership Forum, the Health Protection Team will be engaging in further discussions with public partners to discuss the role of Health Protection in Tayside.

The Health Protection Team will make all incident management reports available on the intranet and internet (Appendix A), unless the IMT agrees that this is not appropriate for any particular incident.

8.0 Progress during 2014-16

Below are topics that were identified for further work during 2014-16:

1. Ensuring joint working arrangements to deliver an effective response (including out of hours), which is consistent with the provisions of the Public Health etc (Scotland) Act 2008

- Local authorities to formalise and implement a robust on-call arrangement for appropriate personnel where it is not yet provided

Each LA has now provided out-of-hours contact details

2. Reviewing, revising and exercising existing protocols and emergency plans in accordance with the schedule at appendix B

These plans have been reviewed and exercised

3. Maximise opportunities for joint learning:

- Provide opportunities for joint CPD

Monthly CPD sessions are now provided in which HPT, PH, microbiology, infection control, occupational health, emergency planning and LA colleagues are invited to participate

- Share learning from participation in the WINCL project investigating norovirus transmission

The publication of this research has been shared and disseminated

4. Learning from the incidents that have recently occurred in Tayside and elsewhere

- Hot debriefs of incidents

This is now standard practice

- Make available incident management reports

These are prepared and submitted to relevant agencies for noting and taking forward recommendations where appropriate

5. Joint working to implement national plans and policies:

- Identify joint actions to implement the VTEC action plan

Relevant actions are being implemented on an on-going basis as they are further developed by national working groups eg the new revised surveillance form is now in use

- Implementing the TB Action Plan for Scotland

Implementation is ongoing, focusing on the key recommendations of the second phase of the TB Action Plan for Scotland, which launched in summer 2016. Work is underway, commencing with an exploration of available data in order to develop an assessment of needs and options appraisal for the establishment of a system offering accessible TB screening and testing to members of new entrant (migrant) and other higher-risk populations in Tayside, involving partners in NHS primary and secondary care services, education authorities and the voluntary sector.

- Continue to implement the new national immunisation programmes

Men B and Men ACWY are now integrated as part of the routine childhood immunisation programme. Changes to HPV and Men C programmes continue to be implemented during 2016

- Implement HP Zone within the national programme for roll-out of the system, ensuring partners are kept informed of and involved in changes in ways of working and communicating

HP Zone is now fully and routinely used by all members of the HPT. On-going cpd opportunities are available for all team members to further develop their skills and HPT fully participates in the national user group

- Engage with Regional Resilience Partnerships

This is now in place

9.0 Recommendations for 2017-19

- Progress recommendations from the Health Protection Team away day in January 2016 to improve and develop longer term strategic team vision, cohesion and priorities
- Share learning from leisure pool incidents to reduce swimming pool related infection
- Implementation of Cleaner Air for Scotland Strategy in Tayside
- BBV focus on prevention
- Migrant health
- Scottish Health Protection Network GIZ priorities
- On-going resilience for Health Protection Team
- Reviewing and revising existing protocols and emergency plans in accordance with the schedule at Appendix B.

Tayside's Joint Public Health Protection Plan is a public document and is available to members of the public on NHS Tayside's Directorate of Public Health website at www.taysidepublichealth.com and on request from:

Directorate of Public Health
NHS Tayside
King's Cross
Clepington Road
Dundee DD3 8EA

Telephone: 01382 596987
Fax: 01382 596985
E-mail: publichealth.tayside@nhs.net

Appendix A: Reporting of Health protection incidents and outbreaks

It is good practice for a full report to be prepared and agreed by the IMT and made available to appropriate agencies. There should also be a presumption in favour of public access to incident reports. The report should consider the effectiveness of the investigation and management measures taken as well as describing the incident. Where appropriate it should contain targeted recommendations.

National guidance is provided in the document -"Management of Public Health Incidents Guidance on the Roles and Responsibilities of NHS led Incident Management Teams revised in October 2011. http://www.scotland.gov.uk/Publications/2011/11/09091844/0. This national guidance is reflected locally in the Tayside Health Protection Major Incident Response Plan.

Reporting of public health incidents and outbreaks should be in the format of an SBAR (Situation, Background, Assessment, Recommendations) report, or a formal Incident report and Minimum Dataset as recommended by Scottish Government and the Health Protection Network (Management of public health incidents: Guidance on the roles and responsibilities of NHS led Incident Management Teams. 2011.)

It may be necessary to delay or limit the circulation of the report pending legal action. Legal advice should be sought in such cases. In situations where pending or ongoing legal or enforcement action makes it impossible to produce a report within the designated timescale, this should be notified to the relevant governance and oversight committees. Consideration should be given to producing a brief 'lessons learned' statement, if necessary with input from organisational legal advisers.

Reports should be completed within 3 months of the closure of the incident/outbreak.

IMT reports and incident SBARs will be presented to the NHS Tayside Public Health Clinical Governance committee for assurance that processes are in place to disseminate learning and to ensure plans are in place for any internal improvement work. The Chair of the IMT or PAG will be responsible for ensuring all further actions identified in the report for NHS Tayside Public Health / Health Protection are completed.

Completion of actions and recommendations by other agencies, including Local Authority partners should be monitored through committee(s) of the individual agencies involved.

Summaries of incidents/outbreaks and agreed actions will be presented to NHS Tayside Clinical Quality Forum, which then reports to NHS Tayside Improvement and Quality Committee (Board governance committee). This reporting will form part of the annual Health Protection report to I&Q.

Summaries and key learning points from incident and outbreak reports will be presented within other reports, such as the Director of Public Health's Annual Report.

IMT reports and incident SBARs will generally be placed on the NHS Tayside intranet Health Protection website, and on the NHS Tayside Public Health internet site for public access. These reports would also be made available through FOI requests or in less formal engagements with members of the public or other interested parties. So that it can be placed in the public domain, the report should not contain any commercially sensitive or person identifiable information.

Appendix B: Programme for review and exercise of plans

Name of plan	Description	Last review	Due review	Lead person	Last exercised	Due for exercise	Lead person
NHS Tayside health protection manual	Departmental guidance for public health management of individual cases, incidents and outbreaks	n/a		TM/DC/JH/LD	n/a	n/a	n/a
NHS Tayside health protection major incident response plan	The objectives of this plan are to ensure prompt action to: • Recognize a major incident or outbreak of food poisoning or communicable disease with serious consequences for the population of Tayside; • Define its important epidemiological characteristics and aetiology; Stop its further spread; • Prevent its recurrence; • Maintain satisfactory communication with external agencies with a legitimate interest in the outbreak.	08/15	08/17	JH	26/03/14	11/16	JH
Public Health resilience and business continuity plan	Sets out the procedures to be followed in the event of a loss of facilities, staff or communications.	03/15	03/16	LM	?	?	LM
NHS Tayside pandemic influenza preparedness response plan	The objectives for the NHS Tayside Plan are to: • Reduce the impact of the influenza pandemic on morbidity and mortality in Tayside, through delivery of appropriate and timely disease prevention, and the organisation of NHS care; • Make provision for the appropriate NHS care of large numbers of ill people and dying people in Tayside; • Provide accurate, timely and authoritative advice and information to professionals, the public and the media.	11/15	11/17	JH	09/15	09/17	JH
Blue Green algae monitoring and action plan	An annual plan has been produced each year since 2001 by NHS Tayside in partnership with all three local authority departments of environmental health,	03/15	03/16	JH	n/a	n/a	JH

	Scottish Water, SEPA and Dundee University. The plan sets out inspection and monitoring frequencies for water bodies at risk of developing algal blooms and details multi-agency actions in various scenarios relating to cyanobacteria and is reviewed each year.						
Scottish waterborne hazard plan	This Plan was developed as a multi-agency approach to the management of waterborne hazards within Scotland, and is led by Scottish Water with involvement of NHS Boards, Local Authority and Environmental Health and Emergency Planning Departments and Health Protection Scotland. It provides guidance for dealing specifically with waterborne hazards to enable a consistent approach to be adopted by staff in all the relevant agencies across Scotland, and is updated nationally every year.	10/13	12/15	SW/HPS	04/14	11/16	JH
STAC Plan	A Science and Technical Advice Cell (STAC) is a group with expert knowledge whose role is to advise the North of Scotland Regional Resilience Group (NSRRG), Tactical LRP or any part of the formal response during an incident, including a declared Major Incident. The fundamental role of the STAC is to: • Undertake a risk assessment; • Advise on risk management measures required; • Advise on risk communication	05/14	12/15	JH	01/16	01/18	JH

A comprehensive list of plans for each of Tayside's Local Authorities can be accessed via the following hyperlinks:
Angus Council
http://www.angus.org.uk/documents.cfm
Dundee City Council
http://www.dundeecity.gov.uk/cplanning/plans/
Perth & Kinross Council
http://www.pkc.gov.uk/Council+and+government/Community+planning+-+working+in+partnership/

EQUALITY IMPACT ASSESSMENT TOOL

Part 1: Description/Consultation

Is this a Rapid Equality Impact Assessment (RIAT)?	Yes x☐	No ☐
Is this a Full Equality Impact Assessment (EQIA)?	Yes ☐	No x☐
Date of Assessment: April 2017	**Committee Report Number:**	**126 - 2017**
Title of document being assessed: JOINT PUBLIC HEALTH PROTECTION PLAN		
1. This is a new policy, procedure, strategy or practice being assessed (If yes please check box) X☐	**This is an existing policy, procedure, strategy or practice being assessed?** (If yes please check box) X☐	
2. Please give a brief description of the policy, procedure, strategy or practice being assessed.	Report describes the health protection partnership between Tayside NHS and the three Tayside local authorities, namely Dundee City Council, Angus Council and Perth and Kinross Council. The report contains a number of recommendations.	
3. What is the intended outcome of this policy, procedure, strategy or practice?	The outcome is that the population of Tayside will be protected against health hazards.	
4. Please list any existing documents which have been used to inform this Equality and Diversity Impact Assessment.	Environment Department Service Plan 2012/17 Food Safety Service Plan 2016-17 Various Health Protection sources including epidemiological statistical references	
5. Has any consultation, involvement or research with protected characteristic communities informed this assessment? If yes please give details.	Yes, it is recognised that some of the people within the protected characteristic communities are more suseptible to health protection hazards such as infections.	
6. Please give details of council officer involvement in this assessment. (e.g. names of officers consulted, dates of meetings etc).	Lindsay Matthew, Food and Health & Safety Manager and Frank Feechan, Performance and Training Manager	
7. Is there a need to collect further evidence or to involve or consult protected characteristics communities on the impact of the proposed policy? (Example: if the impact on a community is not known what will you do to gather the information needed and when will you do this?)	No.	

Part 2: Protected Characteristics

Which protected characteristics communities will be positively or negatively affected by this policy, procedure or strategy?

NB Please place an X in the box which best describes the "overall" impact. It is possible for an assessment to identify that a positive policy can have some negative impacts and visa versa. When this is the case please identify both positive and negative impacts in Part 3 of this form.

If the impact on a protected characteristic communities are not known please state how you will gather evidence of any potential negative impacts in box Part 1 section 7 above.

	Positively	Negatively	No Impact	Not Known
Race / Ethnic Minorities	☐	☐	x☐	☐
Gender	☐	☐	x☐	☐
Gender Reassignment	☐	☐	x☐	☐
Religion or Belief	☐	☐	x☐	☐
People with a disability	x☐	☐	☐	☐
Age	x☐	☐	☐	☐
Lesbian, Gay and Bisexual	☐	☐	x☐	☐
Socio-economic	x☐	☐	☐	☐
Pregnancy & Maternity	x☐	☐	☐	☐
Other (please state)	☐	☐	x☐	☐

Part 3: Impacts/Monitoring

1. Have any positive impacts been identified? (We must ensure at this stage that we are not achieving equality for one strand of equality at the expense of another)	Yes Health Protection aims to protect people, especially the vulnerable. This does not have the effect of protecting one group at the expense of another.
2. Have any negative impacts been identified? (Based on direct knowledge, published research, community involvement, customer feedback etc. If unsure seek advice from your departmental Equality Champion).	No
3. What action is proposed to overcome any negative impacts? (e.g. involving community groups in the development or delivery of the policy or practice, providing information in community languages etc. See Good Practice on DCC equalities web page).	N/A
4. Is there a justification for continuing with this policy even if it cannot be amended or changed to end or reduce inequality without compromising its intended outcome? (If the policy that shows actual or potential unlawful discrimination you must stop and seek legal advice).	N/A
5. Has a 'Full' Equality Impact Assessment been recommended? (If the policy is a major one or is likely to have a major impact on protected characteristics communities a Full Equality Impact Assessment may be required. Seek advice from your departmental Equality lead)	No
6. How will the policy be monitored? (How will you know it is doing what it is intended to do? e.g. data collection, customer survey etc.).	It will be monitored internally for the role of Dundee City Council but we need to develop partnership monitoring arrangements. Regular partnership meetings do take place at the Tayside Gastro-intestinal Liaison Committee.

Part 4: Contact Information

Name of Department or Partnership	Neighbourhood Services

Type of Document	
Human Resource Policy	☐
General Policy	x☐
Strategy/Service	☐
Change Papers/Local Procedure	☐
Guidelines and Protocols	☐
Other	☐

Manager Responsible		**Author Responsible**	
Name:	**Lindsay Matthew**	**Name:**	**Lindsay Matthew as a co-author with representatives from the partner agencies.**
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Signature of author of the policy:	.	**Date:**	12 April 2017
Signature of Head of Service:		**Date:**	12 April 2017
Name of Executive Director:	Elaine Zwirlein.		
Date of Next Policy Review:	To be determined		