Comhairle Chontae Chill Mhantain

Wicklow County Council – Fire Service

Aidan Dempsey
CHIEF FIRE OFFICER

Tel: (01) 211 7600
Fax: (01) 286 1535
E-mail: firehead@wicklowcoco.ie

Fire Service HQ
Boghall Rd,
Bray,
Co. Wicklow.

1st December 2014

Mr Bryan Doyle
Director of Services

Re: Report on Issues relating to the provision of a Full-time Fire Service in Bray and North Wicklow

At a Special Meeting of Wicklow County Council on 19th May 2014 the following resolution was passed:

That the Council would revisit its present policy adopted by the members of the council in relation to the provision of a full-time service in Bray and North Wicklow and that a detailed report would be provided to the Council within six months.

On foot of the above resolution and your instructions I have prepared the following report.

Introduction

This report is presented in the following sections:

- Introduction to "Keeping Communities Safe (2013)" published by the Department of Environment.
- An analysis of Bray Fire Station area based on the risk assessment process outlined in "Keeping Communities Safe (2013)".
- An update on the current situation in Bray Fire Station and Wicklow County Fire Service.
- An analysis of possible staffing arrangements based on options contained in the draft report of 2007.
- Report on current Full Time staffing arrangements in Louth County Council Fire Service.
- Analysis of financial implications of the various options based on adopting the "Louth Full Time System".

Keeping Communities Safe

"Keeping Communities Safe" is described by the Department of the Environment, Community and Local Government as a Framework for Fire Safety in Ireland. While SIPTU is in dispute at a national level over some of the content of "Keeping Communities Safe", it contains the national methodology for assessing risk and determining appropriate response for fire station areas and therefore the application of certain elements of its content is considered necessary in order to develop the comprehensive report required by the Elected Members.

"Keeping Communities Safe" was published by the Department of Environment, Community and Local Government in 2013. The document is described as being fundamentally about assessing fire safety risks, looking at the available resources and proposing a plan for matching risks, needs and resources in Irish society to ensure that the public are safe from fire.

It states that the objective of the fire service is to reduce the risk from fire by using an appropriate blend of the full range of available approaches – in fire prevention, fire protection and response.

It specifies a risk-management approach to service provision and differentiates emergency responses on the basis of risk / threat to life. It specifies that each fire authority is required to prepare a 'Fire and Emergency Operations Plan' which sets out how it meets its statutory duties. It states that each fire service will undertake a review of its current services in light of the approaches and the targets of 'Keeping Communities Safe' and prepare an updated/ revised statutory Section 26 Plan.

The adoption of the Section 26 Plan is a reserved function and it is proposed to present a draft plan to the council in the third quarter of 2015 for consideration. The new Section 26 Plan will set how Wicklow County Fire Service will deliver on targets set in Keeping Communities Safe.

In "Keeping Communities Safe" the primary roles of fire services in relation to fire safety are specified as:

- to reduce the number of fire incidents occurring in their functional area,
- to limit damage where fires do occur, by ensuring appropriate fire protection facilities (such as early detection and warning systems) are in place,
- to prevent escalation to point where single or multiple fatalities are likely to occur; and
- to extinguish fires.

The document focuses on appropriate mitigation measures and, in particular, community fire safety measures such as smoke alarm schemes which can be utilised to increase the safety of the public in their dwellings. Fire authorities can determine the priority needs in their areas and apply the available resources in the most effective configuration, ensuring an appropriate and effective balance between fire prevention, protection and response measures.

The following evolved Community Fire Safety initiatives are recommended:

- Smoke Alarms programme - focus efforts on identified vulnerable, through working with Community and Voluntary sector,
- Implement checks for working smoke alarms in neighbourhoods after attending fires,
- Primary Schools Programme – to create fire safety conscious society,
- Engagement with public on targeted fire safety messages – Fire Safety Week / queries/ fire safety information, and
- Partnerships with related sectors and community groups.

"Keeping Communities Safe" states that the single most important and appropriate means of protecting people from fire in the home has been identified as the provision by householders of working smoke alarms.

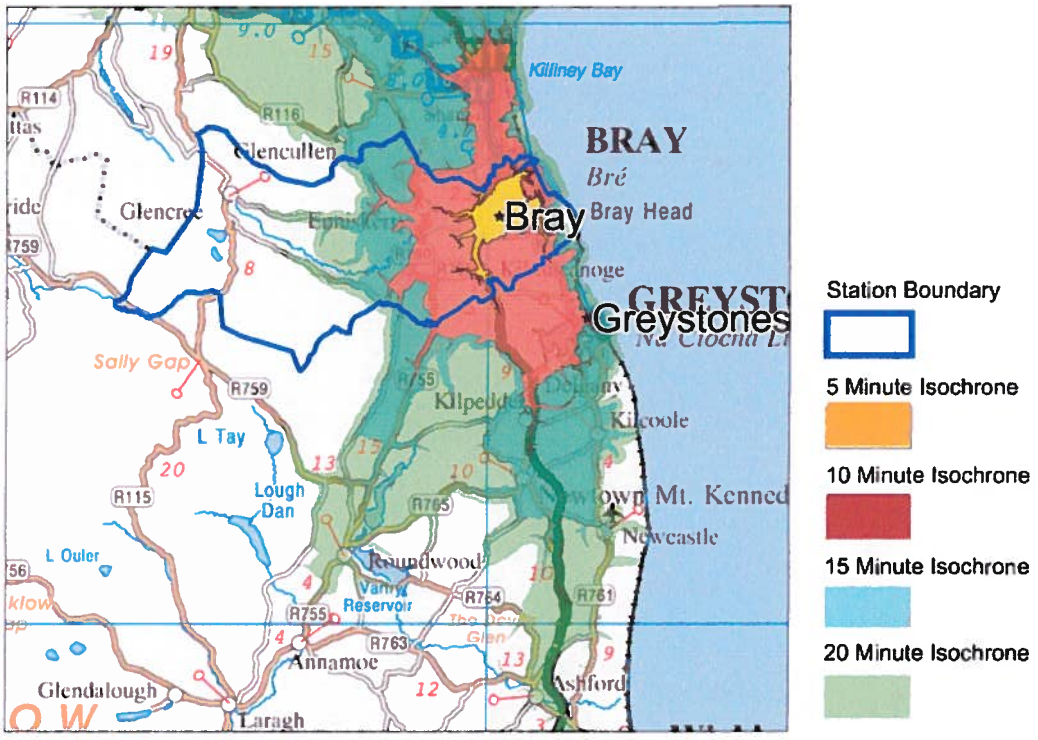
In relation to the above Wicklow County Fire Service implements the annual Primary Schools Programme and engages with the public in relation to targeted fire safety messages.

In 2015 it is proposed to introduce additional fire safety and fire prevention initiatives on a pilot basis. This will include a project to identify the most vulnerable members of the public through partnerships with health, community and voluntary sectors with a view thereafter to installing smoke alarms. In addition it is proposed to introduce visits to domestic properties to check on working smoke alarms in what are considered to be high-risk neighbourhoods and in the aftermath of serious local fires. Should the pilot projects prove to be effective, efficient and sustainable a request for budgetary funding will be made at the end of 2015 to enable the roll out of those projects which are considered to have the greatest potential benefit in 2016.

Risk-Based Approach (RBA) Project

In order to determine the appropriate level of fire service response it is necessary to initially assess the level of risk. The fire station area was selected in "Keeping Communities Safe" as the basic unit of analysis for the Risk-based Approach project. An analysis of fire station activity has been determined to indicate current fire risks and shows how these relate to percentage of population covered and also travel time from station to incidents. Travel time maps have been provided by the Eastern Regional Communications Centre (ERCC) which indicate the travel time from a fire station to areas within and outside the fire station area – as can be seen below:

Isochrone Drive Time Boundaries



The blue line indicates the extent of the fire station area which follows county and townland boundaries and is based on historic data.

The area shaded "gold" indicates the areas that can be reached from a station in a travel time of 5 minutes or less. The area shaded brown can be reached in a travel time of 10 minutes or less. "Teal" represents 15 minutes and "light green" 20 minutes.

This map demonstrates that:

- Bray fire crews can reach most of Bray within a travel time of 5 minutes. Areas in north Bray around Fassaroe and areas on the sea front have a travel time longer than 5 minutes.
- Bray fire crews can reach Enniskerry and Kilmacanogue in a travel time of 5 minutes
- Bray fire crews can reach Glencree in a travel time of 20 minutes.

In assessing a station area the following parameters are measured. Each parameter is presented as a column in the Area Risk Categorisation table below:

- Population of main urban area
- Population Density surrounding main urban area
- Total population of the Station Ground
- Number of Incidents averaged over three years
- Number of dwellings in the station ground
- Annual Dwelling Fire Rate
- Other building fire rates
- RTA activity & Special Services rates
- Extent of Individual Special Hazards

The fire risk categories range across five grades, from very high, high, medium, low to very low risk – and are represented as rows in the table.

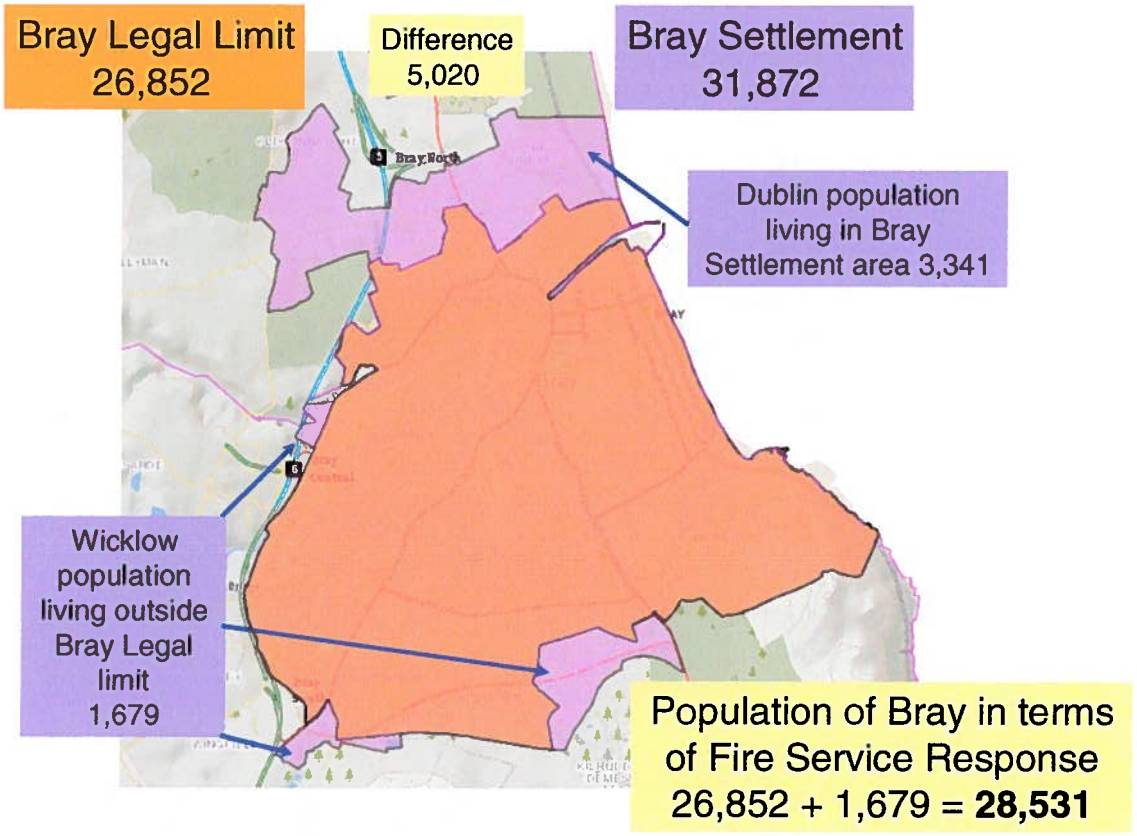
Risk Category	Population			Demand/ Need		Incident Rates			Individual / Special Hazards	Area Risk Designation
	Pop of main Urban centre	Rural Pop density (Persons/ sq km)	Total Pop in Station Area	No of Dwellings in Station Area	Annual Level of Incidents in Station Area	Dwelling Fire Rates/ 100 k of pop	Other Building Rates/ 100 k of pop	RTA/ SS rate/ 100k of pop	Infrastructure Institutional, Recreation, POPA, Educational, Industiral, SEVESO, Shopping/ Commercial	
Very High	>100k	>200	>150	> 50k	> 2500	>250	>100	>250	Multiples of above on largest scale	A1
	70 100	>200	90 - 150k	30 - 50k	1200 - 2500	200 - 250	70 -100	200 - 250	Some of the above	A2
High	35 - 75k	>200	70 -100k	20 - 40k	700 - 1500	150 - 200	50 - 70	170 - 200	Small number of each of the above, on limited scale	B1
	30 -40k		40 - 80k	15 - 30k	500 - 800	120 - 150	30 -50	140 - 170	Some of the above on a limited scale	B2
Medium	10 -30k		25 -40k	10 -15k	250-700	100-120	20-30	120-140	A number of each of the above, of medium scale	C1
	5-12k	50-250	20-30k	7-12k	120-300	80-100	15-25	110-130	A small number of above, of limited scale	C2
Low	3-5k	30-100	10-25k	3-10k	100-130	70-90	10-20	100-120	Some small scale premises in above categories	D1
	1.5-3k	20-50	6-12.5k	2-5k	50-120	60-80	5-15	80-100	A few small scale premises in above categories	D2
Very Low	<2k	<20	<7.5	<4k	<70	50-70	N/A	<80	Very few premises other than domestic	E1
	<1k	<20	<5k	<2k	<50	<50	N/A	<80	Remote Rural	E2

RISK CATEGORISATION TABLE

Each column represents a parameter which is assessed
Each row represents a different category of risk

Population of Main Urban Centre

The first parameter on the table is the "population of the main urban centre" i.e. Bray. The following map shows various interpretations of population for Bray:



Based on CSO statistics from the 2011 census the population of the "legal" town of Bray is 26,852. The settlement of Bray is shown as having a population of 31,872. The difference is explained by the population of South Dublin living in the Old Connaught area of 3,341 and the populations around Fassaroe and the Southern Cross Road numbering 1,679.

In correspondence with Dublin Fire Brigade the Chief Fire Officer of Dublin Fire Brigade has indicated that the fire station in Kill Avenue, Dun Laoghaire is designated to respond to all emergency incidents in South Dublin up to the Wicklow border. I am informed by him that Dublin Fire Brigade's process of assessment has indicated that the crews from Kill Avenue are the closest available in terms of time of response.

Under Fire Services Act the decision on which Fire Brigade will be designated as first response to any address rests with the Local Authority responsible for that functional area.

Population Density surrounding main urban area (persons per square kilometre)	50
Total population of the Station Ground (calculated from CSO data)	33,218
Number of dwellings in the station ground (calculated from CSO data)	12,843
Number of Incidents averaged over three years (from Fsi Computer program)	275
Annual Dwelling Fire Rate (per 100,000 of population, from Fsi Computer program)	76
Other building fire rates (per 100,000 of population, from Fsi Computer program)	18
RTA activity & Special Services rates (per 100,000 of population, from Fsi Computer program)	107

Extent of Individual Special Hazards

Individual / special hazards relates to the number and scale of the following types of buildings and infrastructure, institutional buildings, recreation buildings, places of public assembly, educational, industrial, SEVESO sites and shopping / commercial buildings. In this regard Bray is considered to have a number of each of these types of medium scale corresponding to an area risk designation in this category of Medium, in particular C1.

The above information can be represented in the following table:

Risk Category	Population			Demand/ Need		Incident Rates			Individual / Special Hazards	Area Risk Designation
	Pop of main Urban centre	Rural Pop density (Persons/ sq km)	Total Pop in Station Area	No of Dwellings in Station Area	Annual Level of Incidents in Station Area	Dwelling Fire Rates/ 100 k of pop	Other Building Rates/ 100 k of pop	RTA/ SS rate/ 100k of pop	Infrastructure Institutional, Recreation, POPA, Educational, Industrial, SEVESO, Shopping/ Commercial	
Very High	>100k	>200	>150	> 50k	> 2500	>250	>100	>250	Multiples of above on largest scale	A1
	70 100	>200	90 - 150k	30 - 50k	1200 - 2500	200 - 250	70 -100	200 - 250	Some of the above	A2
High	35 - 75k	>200	70 -100k	20 - 40k	700 - 1500	150 - 200	50 - 70	170 - 200	Small number of each of the above, on limited scale	B1
	30 -40k 31,872		40 - 80k	15 - 30k	500 - 800	120 - 150	30 -50	140 - 170	Some of the above on a limited scale	B2
Medium	10 -30k 28,531		25 -40k 33,218	10 -15k 12,843	250-700 275	100-120	20-30	120-140	A number of each of the above, of medium scale	C1
	5-12k	50-250	20-30k	7-12k	120-300	80-100	15-25 18	110-130	A small number of above, of limited scale	C2
Low	3-5k	50	10-25k	3-10k	100-150	76	10-20	107	Some small scale premises in above categories	D1
	1.5-3k	20-50	6-12.5k	2-5k	50-120	60-80	5-15	80-100	A few small scale premises in above categories	D2
Very Low	<2k	<20	<7.5	<4k	<70	50-70	N/A	<80	Very few premises other than domestic	E1
	<1k	<20	<5k	<2k	<50	<50	N/A	<80	Remote Rural	E2

RISK CATEGORISATION TABLE

It should be noted that both figures for the population previously described have been included in the table to assess the impact on the overall analysis. The issue has been highlighted to the external assessment team from the Department of the Environment who visited Wicklow County Fire Service on 21st November 2014 to audit the process – they indicated that the inclusion of the figure of 31,872 while above the 30,000 upper limit for C1 risks would not affect the overall risk designation for the station area.

As part of the overall process the above assessed Area Risk Designation of Medium – C1 is then compared against the Risk Categorised Response Capability as shown in the following table:

Risk Categorised
Response Capability

Risk Category	Standard Fire Appliance (Class B) Response Capability	Travel Times	Associated Crew Levels (Incl crew commanders)
Very High	1	in 8 mins	5
	2	in 10 mins	9
	3	in 15 mins	13
	4	in 20 mins	17
High	1	in 10 mins	5
	2	in 15 mins	9
	3	in 20 mins	13
Medium	1	in 10 mins	5
	2	in 20 mins	9
	3	in 30 mins	13
Low	1	in 20 mins	5
	2	in 40 mins	9
Very Low	1	in 30 mins	5
	2	in 60 mins	9

The Risk Category indicates target travel time for the first and subsequent pumps to arrive at incidents. These targets are based on a 75% confidence at fire service level – i.e. it is expected that the targets would be achieved on average in three out of four mobilisations by the fire service.

The information in the above table can be summarised as follows:

To demonstrate that the national standard for a station area has been achieved for an area which as been assessed as being in a Medium Risk Category the operational response must achieve the following –

The travel time of the first fire crew to 75% of incidents must be 10 minutes or less.

The travel time of the second fire crew to 75% of incidents must be 20 minutes or less.

The travel time of the third fire crew to 75% of incidents must be 30 minutes or less.

Currently Bray Fire Station is provided with two retained fire crews consisting of 15 personnel. These crews are not rostered therefore they are alerted to all incidents at the same time and based on the nature of the incident will when necessary respond together from Bray Fire Station.

As previously seen from the travel time map Bray fire crews can reach:

- Most of Bray within a travel time of 5 minutes
- Enniskerry and Kilmacanogue in a travel time of 5 minutes
- Glencree in a travel time of 20 minutes.

Population Distribution

As can be seen from the following table of computer generated statistics from the ERCC, 97% of the population of the Bray Fire Station area are within a travel time of 10 minutes of Bray Fire Station and that correspondingly 99% of the population are within 20 minutes travel time of the Fire Station:

Population Distribution by Travel Time

Station ID	StationName	<= 5 Mins	<= 10 Mins	<= 15 Mins	<= 20 Mins	> 20 Mins
WW11	Bray	57%	97%	99%	99%	1%
WW12	Greystones	37%	83%	94%	99%	1%
WW13	Wicklow	62%	82%	94%	100%	0%
WW14	Rathdrum	26%	53%	82%	95%	5%
WW15	Arklow	58%	87%	96%	100%	0%
WW16	Blessington	62%	82%	93%	100%	0%
WW17	Dunlavin	29%	57%	80%	97%	3%
WW18	Baltinglass	47%	79%	90%	95%	5%
WW19	Carnew	36%	69%	91%	97%	3%
WW21	Tinahely	22%	45%	81%	95%	5%

Incident Distribution

Similarly computer generated statistics from the ERCC indicate that Bray fire crews attend 80% of all incidents within a travel time of 10 minutes of Bray Fire Station and that correspondingly they attend 94% of all incidents within 20 minutes travel time of the Fire Station:

Incident Distribution by Travel Time

Station ID	Station Name	<= 5 mins	<=10 Mins	<=15 Mins	<=20 Mins	> 20 mins
WW11	Bray	53%	80%	90%	94%	6%
WW12	Greystones	39%	73%	92%	97%	3%
WW13	Wicklow	46%	80%	91%	96%	4%
WW14	Rathdrum	25%	55%	73%	85%	15%
WW15	Arklow	38%	68%	88%	93%	7%
WW16	Blessington	20%	56%	73%	82%	18%
WW17	Dunlavin	29%	59%	76%	87%	13%
WW18	Baltinglass	35%	59%	78%	87%	13%
WW19	Carnew	38%	71%	82%	86%	14%
WW21	Tinahely	46%	71%	98%	99%	1%

Dwelling Fire Distribution

Similarly computer generated statistics from the ERCC indicate that Bray fire crews attend 84% of all dwelling fire incidents within a travel time of 10 minutes of Bray Fire Station and that correspondingly they attend 94% of all dwelling fire incidents within 20 minutes travel time of the Fire Station:

Dwelling Fire Distribution - Travel Time

Station ID	Station Name	<= 5 mins	<=10 Mins	<=15 Mins	<=20 Mins	> 20 mins
WW11	Bray	47%	84%	93%	94%	6%
WW12	Greystones	35%	75%	92%	98%	2%
WW13	Wicklow	49%	78%	88%	96%	4%
WW14	Rathdrum	21%	42%	63%	100%	0%
WW15	Arklow	53%	76%	84%	89%	11%
WW16	Blessington	26%	52%	78%	87%	13%
WW17	Dunlavin	8%	42%	67%	83%	17%
WW18	Baltinglass	22%	56%	56%	78%	22%
WW19	Carnew	40%	60%	80%	100%	0%
WW21	Tinahely	25%	50%	100%	100%	0%

Therefore looking at the response capability of the two crews in Bray Fire Station, the above data clearly demonstrates that they exceed the specified travel time requirement for the first crew of 10 minutes on 75% of occasions and the second crew of 20 minutes on 75% of occasions. In fact the standard being provided achieves the required standard for the first two crews of a "High Risk Area".

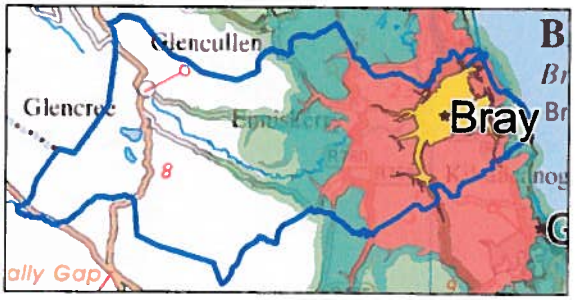
Risk Categorised Response Capability

Risk Category	Standard Fire Appliance (Class B) Response Capability	Travel Times	Associated Crew Levels (incl crew commanders)
Very High	1 2 3 4	in 8 mins in 10 mins in 15 mins in 20 mins	5 9 13 17
High	1 2 3	in 10 mins in 15 mins in 20 mins	5 9 13
Medium	1 2 3	in 10 mins in 20 mins in 30 mins	5 9 13
Low	1 2	in 20 mins in 40 mins	5 9
Very Low	1 2	in 30 mins in 60 mins	5 9

The third fire station in terms of response to the Bray Fire Station area is Greystones. As can be seen from the following maps, Greystones can reach Bray Fire Station in less than 10 minutes and from there can reach areas beyond Enniskerry in a further 5 minutes.

ıe Drive Time Boundaries

Greystones can reach Bray fire station in under 10 minutes.



We know that Bray fire station can reach 97% of the population, 80% of incidents, 84% of Dwelling fires in a travel time less than 10 minutes

From these two statements it is possible to extrapolate and say that Greystones can reach 80% of incidents in the Bray Fire Station Area in a travel time of less than 20 minutes.

Fire Service Response – Wicklow County Fire Service

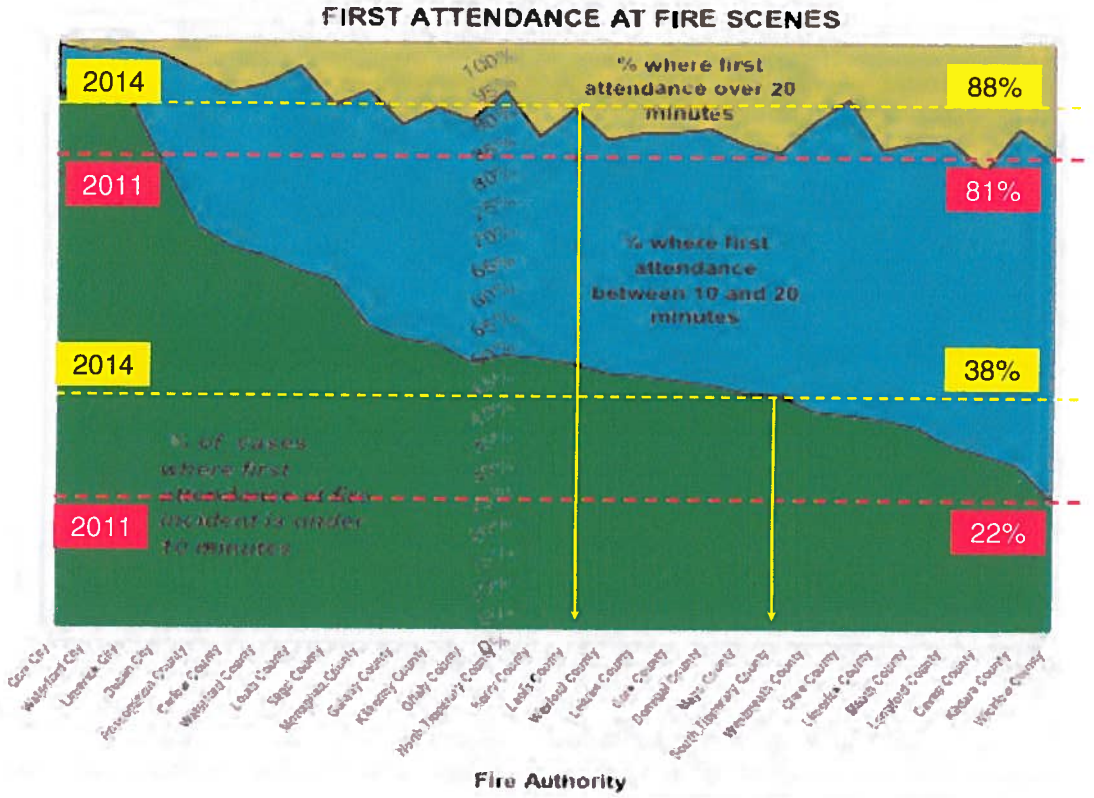
Turnout Times – Bray Fire Station

Average Turnout Time for Bray Fire Station i.e. time for alert sent to fire engine leaving the fire station:

6 minutes 30 seconds

This represents an improvement in the last 2 years of over 2 minutes and is now approaching the national average.

First Attendance at Fire Scenes - Nationally



In 2011, Wicklow County Fire Service was assessed nationally as attending the least number of incidents in under 10 minutes i.e. 22%.

The ERCC re-assessed Wicklow's response in 2014 and this figure had increased to 38%. Similarly the 2011 figure of 81% of incidents attended in under 20 minutes improved to 88% in 2014.

Incident Rates – Bray / Wicklow / Nationally

Overall incident rate in Bray is down from an average of 371 per year in the period 2008 - 2010 to 275 per year in the period 2011 – 2013. This represents a 26% reduction.

The Incident Rate per 100,000 of population for Bray Fire Station:

2008 to 2010	1,100	
2011 to 2013	828	this represents a 25% reduction

The current rate is above the county average of 759 and below the national average of 1,283

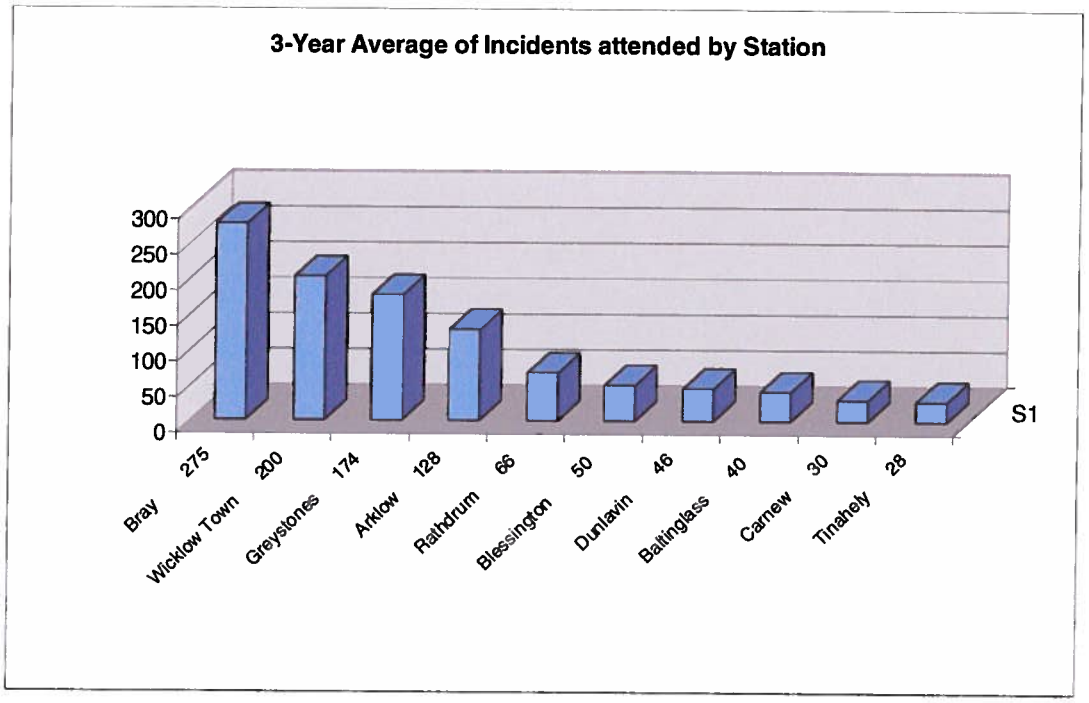
The Dwelling Fire Rate per 100,000 of population:

2008 to 2010	114	
2011 to 2013	76	33% reduction

The current rate for dwelling fires in Bray is below the national average of 99 and slightly above the county average of 70.

The reduction in incidents is a county-wide and country-wide trend.

Average Incident Rates per Station in County Wicklow



National Statistics

Bray is one of a number of large towns in Ireland without a full time fire service:

Population of Main Urban Area

Full-Time		Retained		Northern Ireland Retained	
Limerick	91,454	Navan	28,559	Carrigfergus	27,201
Galway	76,778	Bray	28,531	Coleraine	25,089
Waterford	51,519	Ennis	25,360	Antrim	20,001
Drogheda	38,578	Kilkenny	24,423	Larne	32,180
Dundalk	37,816	Tralee	23,693		
		Carlow	23,030		
		Newbridge	21,561		
		Naas	20,713		

When considering a range of parameters Bray falls within a group of towns with retained fire services.

Location	Population Of Station Area	Average incidents per year	Population Of Urban Area
Drogheda	68,760	510	38,578
Dundalk	52,024	416	37,816
Naas	52,514	425	20,713
Newbridge	51,795	400	21,561
Tralee	42,819	382	20,288
Ennis	42,793	331	24,253
Navan	42,038	430	28,559
Kilkenny	33,218	375	24,423
Bray	33,158	275	28,531

Considerations in relation to the provision of a full-time service in Bray and North Wicklow

Advantages of a Full-Time Fire Service

The following are some of the advantages associated with a Full-time fire service over a Retained Fire Service:

- Turnout times decrease by approximately 5 minutes
  (the time from alert being received to time mobile to an incident)
- Crews available for Community Fire Safety
- Crews on duty perform all maintenance of equipment
- Crews available to conduct Pre Incident Planning
- Crews available to carry out Hydrant checks

Incident Distribution by Travel Time if Full Time

Station ID	Station Name	<=	<=5 mins	<=10 mins	<=15mins	
WW11	Bray	53%	80%	90%	94%	6%
WW12	Greystones	39%	73%	92%	97%	3%
WW13	Wicklow	46%	80%	91%	96%	4%
WW14	Rathdrum	25%	55%	73%	85%	15%
WW15	Arklow	38%	68%	88%	93%	7%
WW16	Blessington	20%	56%	73%	82%	18%
WW17	Dunlavin	29%	59%	76%	87%	13%
WW18	Baltinglass	35%	59%	78%	87%	13%
WW19	Carnew	38%	71%	82%	86%	14%
WW21	Tinahely	46%	71%	98%	99%	1%

In effect a full time fire service for Bray could see an improvement in the percentage of incidents attended in under 10 minutes from 80% to 90%.

Limitations of a Full-Time Fire Service

International research indicates the following:

"No matter how good the response time of firefighters, it remains the case that roughly half of those who die in fires are dead before the Fire and Rescue Service has even been called.

Fire Prevention is the best way of reducing the number of deaths and injuries from fires."

Mr Clive Norris, Director of Fire and Rescue Services,
Office of the UK Deputy Prime Minister (2004)

It can be concluded from this and the content of "Keeping Communities Safe" that the single most important and appropriate means of protecting people from fire in the home has been identified as the provision by householders of working smoke alarms.

Possible Organisational Arrangements
(based on draft report 2007)

- Day Manning i.e. providing full-time fire crews during part of the day only.
- Amalgamate Bray and Greystones Fire Stations with a new centrally located fire station positioned between the two existing fire stations.
- Replace 2 Retained Crews in Bray with 1 Full Time Crew and 1 Retained Crew.
- Replace 2 Retained Crews in Bray with 1 Full Time Crew i.e. eliminate the retained element of the service.
- Replace 1 Retained Crew in Bray with one Full-time Crew, keep 1 retained crew in Bray and close Greystones fire station
- Replace 2 Retained Crews in Bray with 2 Full Time Crews

Day Manning

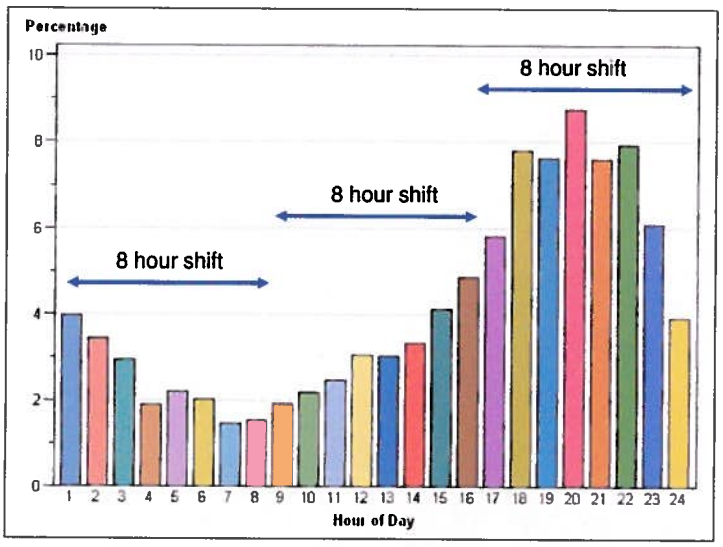


Chart Showing Percentage of Incidents Attended in Bray by hour of day

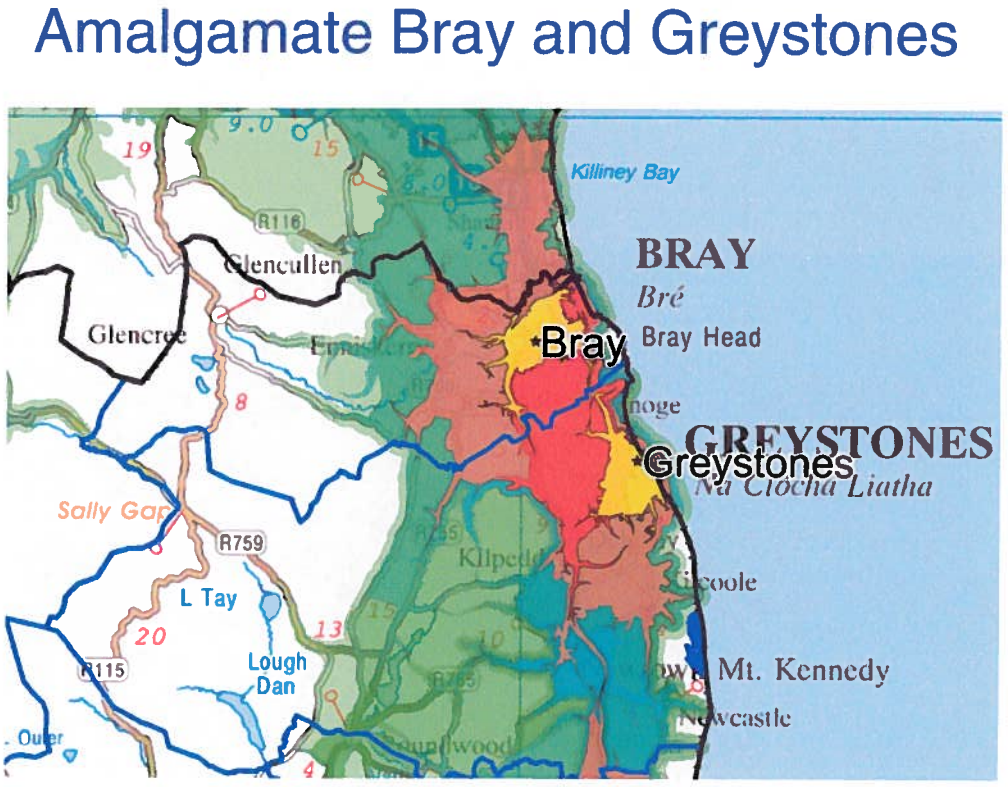
As can be seen from the above chart, "Day Manning" usually refers to a single shift of full time firefighters during normal working hours e.g. 9 a.m. to 5 p.m.

The chart shows that for Bray the greatest number of incidents occur between 6 p.m. and 11 p.m. outside the period covered by day manning.

In addition the most serious incidents generally occur between midnight and 4 a.m. again outside the time covered by "day manning".

For the above reasons "day manning" is less favoured by fire authorities as evidenced by in its replacement by a 24 hour service in both Dundalk and Drogheda in recent years.

Amalgamate Bray and Greystones Fire Stations with a new centrally located station



The above map indicates that the current station boundary between Bray Fire Station and Greystones Fire Station is roughly 5 minutes travel time between the two. Therefore a new fire station on the current station boundary would increase the response times to both Bray and Greystones by approximately 5 minutes thereby negating the main benefit of introducing a full time fire service.

Replace 2 Retained Crews in Bray with 1 Full Time Crew and 1 Retained Crew.

This would have the effect of reducing from 2 retained fire crews in Bray to one retained fire crew, thereby reducing from 15 retained personnel to 9. This would have a number of possible consequences:

- The number of calls for the retained would reduce considerably.
- Lower call numbers usually leads to slower response times.
- For serious incidents i.e. those with a pre-determined attendance of 2 fire crews, the "weight of response" would still be determined by the time of response of the retained fire crew – which is likely to be less than the current response time.

Note: "Pre-Determined Attendance" or "PDA" is a term used in the fire service to describe a pre-arranged fire service response that is mobilised by a control room operator on receipt of a 999/112 call. For a given townland the PDA is a list of fire stations based on the quickest response time to the address. A separate "incident PDA" will determine the number of fire engines that will be mobilised. For example, one fire engine is mobilised to an outdoor bin on fire, two fire engines are mobilised to a fire in a house.

Replace 2 Retained Crews in Bray with 1 Full Time Crew

In this scenario should a second fire crew be required i.e. for serious incidents, the second crew would come from Greystones Fire Station.

- For serious incidents the "weight of response" would be determined by the time of response of the retained fire crew from Greystones. This would be slower than the current response time for 2 crews as provided by the 2 retained fire crews in Bray.

Replace 1 Retained Crew in Bray with full-time, keep 1 retained crew in Bray and close Greystones fire station

There is no configuration of options / scenarios involving the closure of Greystones Fire Station that would not result in reduced fire cover for the town of Greystones and its environs including Delgany, Kilpeddar, Newcastle, Kilcoole and Newtown Mount Kennedy.

- Greystones currently turn out in close to 5 minutes. The ERCC estimate that it is a 10 minute drive from Bray Fire Station to Greystones Fire Station.

- For serious incidents the "weight of response" would still be determined by the time of response of a retained fire crew from Bray or Wicklow Town.

Replace 2 Retained Crews in Bray with 2 Full Time Crews

This option represents an improvement in operational response in the Bray Station Area.

Louth County Fire Service – Full Time Model

As stated previously, Louth County Fire Service replaced its "day manning" model for Dundalk and Drogheda with full time fire services in both towns. Each town was provided with 1 full time crew supported by 1 retained crew.

Louth Fire Service (Sept 2012 – Sept 2013)

	Drogheda			Dundalk			Other Stations	Total
	A1 (FT)	A2 (R)	B1 (R)	A1 (FT)	A2 (R)	B1 (R)	Ardee/ Carlingford/ Dunleer	
Mobilisations (first turnouts)	510	83	38	416	101	41	229	1418
Mobilisations (other turnout areas)	46	1	20	40	5	9	152	273
Total	556	84	58	456	106	50	381	1691

Drogheda attends 85% more incidents than Bray per year.
Dundalk attends 51% more incidents than Bray per year.

Louth Fire Service
Sept 2012 – Sept 2013

	Drogheda			Dundalk			Other Stations	Total
	A1 (FT)	A2 (R)	B1 (R)	A1 (FT)	A2 (R)	B1 (R)	Ardee/ Carlingford/ Dunleer	
Mobilisations (first turnouts)	510	83	38	416	101	41	229	1418
Mobilisations (other turnout areas)	46	1	20	40	5	9	152	273
Total	556	84	58	456	106	50	381	1691

Back up retained crews in Dundalk and Drogheda attend between 16% and 25% of the stations calls – for Bray 70 calls.

Louth Fire Service
Sept 2012 – Sept 2013

Features of System for Dundalk and Drogheda:

No. of full time staff	55	Dundalk 28, Drogheda 27 4 shifts of 5 personnel
No. of retained staff	16	Dundalk 8, Drogheda 8
Training Roster		700 – 800 person days per year
Community Fire Safety		200 hrs per station
Additional Advantages		Maintenance of equipment Pre Incident Planning Hydrant checks

Issues in Full-Time Fire Service in County Louth

- Retained Manning Levels are difficult to maintain due to reduction in income for retained personnel.
- Turn out times for retained crews has decreased.
- Manning of Special Appliances is the role of retained personnel, operational response suffers for the above reasons.
- Achieving agreed daily routines with full time staff.
- Training courses of longer than 2 days seriously disrupt the roster and can have cost implications
- Difficulty in arranging meetings with Station Officers (i.e. available one day over 4 week period)
- Reduction in use of training centres due to health and safety issues.

Possible Disadvantages of a Full-Time Fire Service

Maintaining manning levels of retained personnel – call reduction

Reduction in response times – Retained Service

Loss of personnel who do not transfer to Full Time service

Possible loss of community ethos

Significant building costs

Curtailment of current training activities in Bray Fire Station

The following figures have been extrapolated from budget figures currently in use in Louth. They are provided for planning purposes only.

Rough Estimate 2 Full Time Crews

Item	Amount
Fire service clothing	€65,000
Fire service equipment	€50,000
Station light and heat	€25,000
Fire service diesel / petrol	€20,000
Station repair and maintenance	€20,000
Insurance	€100,000
Full time firefighter wages	€3,529,379
Total	**€3,809,379**
Bray Operational Wages 2013 (15 personnel)	Saving €450,000
Bray Fire Station – if reduced to 9 personnel	Saving €200,000
Greystones Operational Wages 2013	Saving €230,000

Based on the information in the preceding table a planning figure in relation to the costing in relation to each of the options can be presented in the following table:

Rough Estimate of Additional Annual Costs

Item	Amount
Day Manning – one shift Day Manning – two shifts Reducing Bray to 1 Retained Crew would save €200,00 from these figures	€1,250,000 €2,500,000
Amalgamate Bray and Greystones Fire Stations with a new centrally located station	€3,120,000 two crews
Replace 2 Retained Crews in Bray with 1 Full Time Crew and 1 Retained Crew	€1,700,000
Replace 2 Retained Crews in Bray with 1 Full Time Crew	€1,450,000
Replace 2 Retained Crews in Bray with 1 Full Time Crew and 1 Retained Crew and close Greystones fire station	€1,470,000
Replace 2 Retained Crews in Bray with 2 Full Time Crews	€3,350,000 two crews

Conclusions

- The national Risk Based Analysis process indicates that current staffing arrangements in Bray exceeds the required national standard.
- A Full-time Fire Service in Bray would primarily improve response times by approximately 5 minutes per crew.
- Replacing the current 2 Retained fire crews with 2 Full Time crews represents the lowest risk and highest cost option in relation to fire service staffing for the Bray Station Area
- The number of incidents attended in the Bray Station area has decreased by approximately 25% in the last 3 – 6 years in line with national trends.
- Statistically Bray can be grouped with a number of other large Irish and international towns with Retained Fire Services.
- International research indicates that "roughly half of those who die in fires are dead before the fire service has been called."
- National and international best practice recommends a greater focus on fire prevention measures over operational response.

Aidan Dempsey
Chief Fire Officer