

Technical Appendix 8: Fire and Rescue Service



1.0 Service Overview

1.1 The county council, in its capacity as the Fire and Rescue Authority (FRA), has statutory duties under The Fire and Rescue Services 2004 and must make provisions for:

- extinguishing fires in their area
- protecting life and property in the event of fires in their area
- rescuing and protecting people in the event of a road traffic collision, and
- rescuing and protecting people in the event of other emergencies.

1.2 The Civil Contingencies Act 2004 sets out FRAs responsibility to react to emergencies as a category 1 responder.

1.3 Underpinned by statutory obligations within the Fire and Rescue Services Act 2004, the Fire and Rescue National Framework for England provides the overall strategic direction for Fire and Rescue authorities. Within the framework, each authority is required to produce a [Community Risk Management Plan \(CRMP\)](#) that identifies and assesses all foreseeable fire and rescue related risks that could affect its community. Each CRMP must demonstrate how prevention, protection and response activities will best be used to mitigate the impact of risk on its communities. Through local determination of risk and local determination of response standards, it is expected that this will:

- Reduce the number of emergency incidents occurring;
- Reduce death and injury from fire and other emergency incidents;
- Ensures emergency response standards are met;
- Reduce the socio-economic impacts of fire;

- Protect heritage;
- Safeguard the environment;
- Contribute to the development of stronger, more self-sufficient and cohesive communities;
- Provide value for money.

1.4 The above legislation imposes a requirement on Fire and Rescue Authorities to ensure efficient and effective fire and rescue provision, and to ensure that the Service contributes effectively to the wider community safety agenda.

1.5 The Service currently operates from 29 fire stations, a training and development centre, and a number of additional sites providing support services.

1.6 Increases in population place additional demand on fire and rescue resources, both in terms of the need for additional capital investment in new facilities and funding for additional equipment, and on revenue budgets for firefighters, officers and support staff.

1.7 It is, therefore, reasonable for fire and rescue service needs to be considered by local planning authorities when determining planning applications relating to the provision of new development which brings forward an increased risk of incidents; changes the risk profile for the area and increases attendance times to incidents.

1.8 The capability and availability of water resources to fight fires is also a key consideration for the Service. The provision of public fire hydrants is not covered by Building Regulations 2010 (Part B5 as supported by Secretary of State Guidance 'Approved Document B') and developers are expected to make provision for fire hydrants to adequately protect a development site for fire-fighting purposes.

1.9 In practice, the number and location of hydrants is determined at the time the water services for the development are planned in detail, which is usually after planning consent is granted. In instances where adequate hydrants are available at the time the water mains are planned, no extra hydrants will be needed.

1.10 Fire hydrants should be designed into the development at the masterplanning stage and implemented through a planning condition. Condition wording is provided below:

No above ground works shall take place until a scheme for the provision of adequate water supplies and fire hydrants, necessary for firefighting purposes at the site, has been submitted to and approved in writing by the Local Planning Authority. The development shall not be occupied until the scheme has been implemented in accordance with the approved details.

Reason for condition: to ensure adequate water infrastructure provision is made on site for the local fire service to discharge its statutory firefighting duties.

1.11 The developer, promoter, and/or local planning authority should coordinate with the Water Officer to confirm the requirement for a condition, and any subsequent need to discharge, remove or change the condition. The Water Officer is contactable at water@hertfordshire.gov.uk.

2 Assessing need and calculating contributions

2.1 The demands on fire and rescue resources manifest themselves in a variety of forms, dependent on the scale and nature of the proposed development, including the need to:

- acquire land and the capital costs of fire and rescue service buildings and associated facilities for the provision of new fire stations;
- extend existing fire stations;
- replace any temporary structures with permanent accommodation;
- provide additional vehicles and other resources for response;
- provide additional equipment or resources necessary to respond to risks identified in the CRMP published in March 2024;
- extend communication infrastructures;
- reduce risk and demand through advice and the provision of equipment e.g. improve fire suppression (sprinklers) systems in existing and/or new premises;
- enforcement: the fire and rescue service is a regulator of fire safety compliance in many businesses and this includes a requirement to inspect plans and high risk premises; in some instances this leads to the requirement for formal action / prosecution of businesses who neglect their duties to provide fire safe buildings;
- hydrants: we employ staff to inspect water hydrants and ensure they are in good working order in advance of them being required to fight fires; additions to premises numbers increases ongoing revenue costs in this area;
- review staffing levels.

2.2 The provision of effective fire and rescue services is dependent upon maintaining both a local and strategic approach. The value of the contribution required to mitigate the impact of development on fire and rescue resources will, therefore, need to take account of both these factors.

2.3 The tables provided below outline the fire and rescue service capital calculation of a requirement for development of new dwellings across Hertfordshire. The fire and rescue service calculate its capital requirement to be £429.20 per new residential unit and £20.89 per m² for commercial floorspace.

2.4 The service will assess demand on a per dwelling basis, including older people's housing and supported housing, irrespective of household occupations. The exception to this is for care home development where need will be based on the number of beds.

Calculation of costs: Residential

Item	Description	Data
	Cost of new additional fire stations, appliances and equipment	
1	Number of Households in Hertfordshire ¹	485,041
2	Divide by the number of fire stations	29
3	Average number of dwellings per fire station (1 ÷ 2)	16,725
4	Estimated build cost per fire station (Q1 2020)	£5,750,000
5	Average cost of new fire appliance plus equipment ²	£416,000
6	Average cost per new dwelling towards buildings, appliances and equipment ((4 + 5) ÷ 3) by new build increase	£368.67
7	Indexed to Q1 2024	£429.20 / dwelling
8	Average cost per new dwelling towards equipment only (5 ÷ 3)	£24.87

¹ Data from CIPFA Fire and Rescue Service Statistics – 2019 Summary

² Data from HFRS procurement department

Calculation of costs: Commercial

Item	Description	Data
	Activity factor	
1	Non-residential fires as a percentage of all property fires (3-year average) ³	21.76%
	Cost of new additional fire stations, appliances and equipment	
2	Number of non-residential businesses in Hertfordshire ⁴	69,700
3	Divide by the number of fire stations	29
4	Average number of non-residential buildings per fire station	2,403
5	Estimated build cost per fire station (Q1 2020)	£5,750,000
6	Average cost of new fire appliance plus equipment ³	£416,000
7	Average cost per new non-residential unit towards buildings, appliances and equipment ((5 + 6) ÷ 4)	£2,566
8	Total non-residential floorspace in Hertfordshire ⁵	9,947,000 m ²
9	Average floorspace per non-residential business (8 ÷ 2)	143 m ²
10	Cost per non-residential building per m ² (7 ÷ 9)	£17.94
11	Indexed to Q1 2024	£20.89 / sqm

³ Data from HFRS Vision incident recording system

⁴ Company Formations in Hertfordshire, UK in 2022 - Inform Direct

⁵ NDR Business Floorspace Tables 2022.xlsx (live.com)

2.5 Fire appliance response time isochrone maps are used to model service provision. This ensures that there is adequate capacity at fire stations and that the service response standards are met. These maps will be used to identify which fire station an appliance will likely be mobilised from within the current attendance standards and whether capacity work has been identified at that station.

- 2.6 If a development falls outside of an identified project, the fire and rescue service will seek a contribution towards additional equipment or resource costs needed to mitigate the extra dwellings. The calculation is based on relevant evidence, considering the increase in dwellings and the proportional cost of items including fire prevention and equipment needed for road traffic collisions, which equates to £24.87 per dwelling.
- 2.7 A contributions calculator has been developed and is published alongside this Guide on the council's website. This will help give certainty about potential funding requirements to be secured by S106 agreement. This calculator is merely an indication of contributions and engagement with the county council is advised as early as possible for officers to be able to confirm which services it will seek a contribution towards based on up-to-date knowledge of service capacity and planned projects in the relevant location.

Building new fire stations

- 2.8 When building a new fire station, it is essential that all factors are considered within the design to ensure that both operational and local community needs are met.
- 2.9 There are various staffing models in operation across Hertfordshire Fire and Rescue Service (HFRS) which directly influence the size of, and range of facilities required. Further information can be found in HCC's Service Provision and Place-Making Guide.

Fire Suppression (Sprinkler) systems

- 2.10 The emphasis for the Fire and Rescue Service is changing from that of reacting to fires and other emergencies, to preventing and reducing their impact on individuals, communities and organisations. In developing prevention strategies, Fire Authorities are including the use of fire suppression systems, particularly sprinklers, and fire alarms to protect the most at risk and vulnerable in society.
- 2.11 The expansion of Hertfordshire through development provides an opportunity to take a lead by applying a proactive approach towards protecting the community and infrastructure through in-built fire suppression systems.
- 2.12 A sprinkler installation can significantly help to mitigate the loss of life and damage to property caused by fire and the ongoing financial and social disruption to the householder or community. Click for more information about [Efficiency and Effectiveness of Sprinkler Systems in the United Kingdom](#).