

Form 1 Application for Approval of Basic Design Parameters for Automatic Sprinkler System Installations

1. Name of Protected Premises

Site Name _____
Address _____

2. Work to be Carried Out

- | | | |
|---|---|---|
| <input type="checkbox"/> New System | <input type="checkbox"/> Extension or Alteration to Existing System | <input type="checkbox"/> Change of Use / Occupancy |
| <input type="checkbox"/> New Water Supply | <input type="checkbox"/> Alteration to Existing Water Supply | <input type="checkbox"/> Installation of In-Rack Sprinklers |

Note: For extensions, alterations and changes to existing systems, please provide a copy of current re-inspection report

Approximate Completion Date _____ Nominated Inspection Company _____

3. Approval Standards

- | | |
|--|--|
| <input type="checkbox"/> NZS4541:2003 | <input type="checkbox"/> NZS4541:2007 |
| <input type="checkbox"/> NZS4541:2003 As Modified by NZBC C/AS1 Appendix D | <input type="checkbox"/> NZS4541:2007 As Modified by NZBC C/AS1 Appendix D |
| <input type="checkbox"/> Other _____ | |

- Note:*
- Please provide a copy of the Fire Report and Specification prepared for Building Consent for all systems other than those complying with NZS4541:2003.*
 - Approval for systems complying with NZS4541:2007 As Modified by NZBC C/AS1 Appendix D is not possible until the NZBC has been updated to reference NZS4541:2007. Until then this would need to be regarded as an alternative solution.*

4. Building Details

Principle Use(s) of Building _____
 Number of Floors _____ Building Height (m) _____

Construction (Include details of FRR where appropriate)

Exterior Walls _____
 Floors _____
 Ceiling _____
 Roof _____

Are There Any Concealed Spaces in the Building? Y (Indicate below) N

Location	Is the Concealed Space Greater Than 800mm Deep	Describe How The Space will be Protected
<input type="checkbox"/> Ground to Floor	<input type="checkbox"/> Y <input type="checkbox"/> N	
<input type="checkbox"/> Ceiling to Floor	<input type="checkbox"/> Y <input type="checkbox"/> N	
<input type="checkbox"/> Ceiling to Roof	<input type="checkbox"/> Y <input type="checkbox"/> N	
<input type="checkbox"/> Underfloor	<input type="checkbox"/> Y <input type="checkbox"/> N	

5. Separation

Hazard	Description	How will Separation be Achieved
Unsprinklered Fire Cells within the Building		<input type="checkbox"/> Construction <input type="checkbox"/> Distance
		<input type="checkbox"/> Internal Drenchers → Demand: _____ l/min _____ kPa
		<input type="checkbox"/> Other (Describe) _____
External Fire Loads Within 10m)		<input type="checkbox"/> Construction <input type="checkbox"/> Distance
		<input type="checkbox"/> External Sprinklers → Demand: _____ l/min _____ kPa
		<input type="checkbox"/> Other (Describe) _____

6. Occupancies and Design Criteria

Is there a signed declaration (AON Form 3 or 4 attached)?

Y N

Note: If a signed storage declaration is not available, please attach a draft declaration

If no, please advise expected date of submission

Non-Storage Areas							
Area as Shown on Block Plan	Usage	Occupancy (<i>ELH, OH1, OH2, OH3, OH3S, EHH Process</i>)	Height of Highest Sprinkler in Occupancy	Type of Sprinkler (<i>SSU, SSP, Residential, ECOH...</i>)	Design Criteria (<i>No. of Heads, Density x Area...</i>)	Design Flow (<i>l/min</i>)	Design Pressure (<i>kPa</i>)
1							
2							
3							
4							
5							
6							

Storage Areas							
Area as Shown on Block Plan	Highest Commodity Classification	Storage Configuration (<i>BB, SP,P, ShS, WSS, PSS, SS, SRR, DRR, MRR</i>)	Height of Highest Sprinkler in Occupancy	Roof Level Design Criteria	Type of Roof Level Sprinklers	IRS Design Criteria (<i>No of Sprinklers & Pressure</i>)	Applicable Modifiers (<i>See Note 2</i>)
1							
2							
3							
4							
5							
6							

- Note:
1. *BB – Box Bin, SP – Solid Pile, P – Palletised, ShS – Shelf, WSS – Without Solid Shelves, PS – Partial Solid Shelves (1.9m² to 5.9m²), SS – Solid Shelves (>5.9m²), SRR – Single Row Rack, DRR – Double Row Rack, MRR – Multi Row Rack.*
 2. *List any factors such as use of dry systems, plastic pallets, encapsulation, excessive clearance, roof slope... that modify the design criteria (note that this list is not exclusive – please refer to the standard).*

Special Risks

Please provide details of any special risks below (e.g. Idle pallets, flammable an combustible liquids, aerosols, rolled paper storage, rubber tyre storage, hanging garment storage...)

7. Water Supplies

What is the Water Supply Class (*tick*)

NZS4541:2003 →	<input type="checkbox"/> A	<input type="checkbox"/> B1	<input type="checkbox"/> B2	<input type="checkbox"/> C	<input type="checkbox"/> NZBC Single Supply
NZS4541:2007 →	<input type="checkbox"/> A	<input type="checkbox"/> B2	<input type="checkbox"/> C1	<input type="checkbox"/> C2	<input type="checkbox"/> NZBC Single Supply

Describe Each Water Supply (Source, Storage Capacity, Pump Description – Provide pump and driver details with application).

Primary	
Secondary	

- Attach Hydraulic Graph for each supply with highest design flows and pressured indicated, in accordance with Figure A1. – NZS4541:2003, or NZS4541:2007 Fig C1.
- Show on Block Plan all valves between source and alarm valve. Show valves closed during water supply testing. If Class B system, show mains interconnections and valves and describe location of water reservoir. If the flow test is carried out on street hydrants, show location of flow test and pressure test points, and include data on any differences in relative levels between test points and proposed valve location.
- If electric motor driven pumps, sketch on the Block Plan the route of the medium voltage circuit and the circuit position of all switchgear on it from the pump to the transformer or the point of entry to the protected premises.
- Please attach NSPH calculations for pumps drawing water from storage tanks.
- Provide details of any pressure control systems being provided on pumped supplies, including relief and reducing valves
- Provide location of back flow prevention device, and confirm security arrangements against interference being provided.

8. Valvesets

Valveset No.	Type (X, Y, Enhanced Safety, Pre-action, Deluge, Dry...)	Make, Model & Size	Extension Area (m ²)	Total Area (m ²)	Extension Concealed Space Area (m ²)	Total Concealed Space Area (m ²)	No. of Floor Isolate Valves	No. of Flow Switches

Note: Include details of any tail end systems etc in the table above.

9. Sprinkler Hardware

Please provide details of all sprinklers to be used in the installation.

Type								
Make & Model								
SIN No.								
Thread Size								
K-factor (l/min.kPa ^{1/2})								
Approx Qty.								
Location								

Note: Enclose a copy of the manufacture's datasheet for residential, institutional, extended coverage, extra large orifice or special application sprinklers.

10. FBA Connection

Provide details of Fire Brigade Alarm type and monitoring connection.

11. Hand Operated Fire Fighting Equipment (HOFFE)

Provide details of HOFFE

Extinguisher Type	Size	Rating	Quantity

Fire Hose Reel Type	Hose Dia (mm)	Hose Length	Quantity

Confirm that HOFFE complies with NZS4503:2005

Y

N

N/A - NZBC

12. Issues to be Disclosed

Please outline any issues that need to be brought to the attention of the SSC, where the Standard indicates that such issues need to be approved by the SSC, or any issues that the SSC should be aware of that are not explicitly evident in the submission. (May be in the form of a covering letter or attachment.)

13. Block Plan

Please attach an A3 or A4 Block Plan, indicating following items:

- | | | | | | |
|----------------------------|--|------------------------------------|------------------------------|--|--|
| <input type="checkbox"/> Y | Scale | <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Location of Subsidiary Stop Valves | |
| <input type="checkbox"/> Y | North Point | <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Location of Drain Valves | |
| <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Fire Separations | <input type="checkbox"/> Y | Water Supplies Showing All Valves Between the Source and Alarm Valve | |
| <input type="checkbox"/> Y | <input type="checkbox"/> N/A | External Sprinklers | <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Power Supply Route for Electric Motor Driven Pumps |
| <input type="checkbox"/> Y | Hazard Classifications, Densities and Assumed Areas of Operation | | <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Location of Any Fire Alarm Panel |
| <input type="checkbox"/> Y | Height of Highest Sprinkler in Each Hazard Classification Area | | <input type="checkbox"/> Y | | Location of Any Back Flow Prevention Unit |
| <input type="checkbox"/> Y | Area Protected by Each Installation | | <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Location of Floor Isolate Valves, Flow Switches, etc |
| <input type="checkbox"/> Y | Location of FSI and Valves | | <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Location of Tail End Systems Such as Pre-Action, Deluge, Dry, Anti-Freeze, etc |
| <input type="checkbox"/> Y | <input type="checkbox"/> N/A | Location of Water Supply Strainers | <input type="checkbox"/> Y | | Location of the Water Motor Alarm Gong |

Provide a copy of a Cross Section showing the highest head(s) the height of the alarm valves, relative to the water supply test points, and where used, pump house, tank, and suction inlet.

Conditions of Contract: By signing this form, we accept Aon's Standard Conditions of Contract. A copy of these are available on request.

Signed _____ Company / Contractor _____
 Name _____ Date _____

Please forward in duplicate to Aon Sprinkler Certification, PO Box 331240, Takapuna, North Shore City, 0740