Department of Building and Housing
Te Tari Kaupapa Whare

Determination 2009/1

The code-compliance of a private hospital building at the corner of Knox and Anglesea Streets, Hamilton

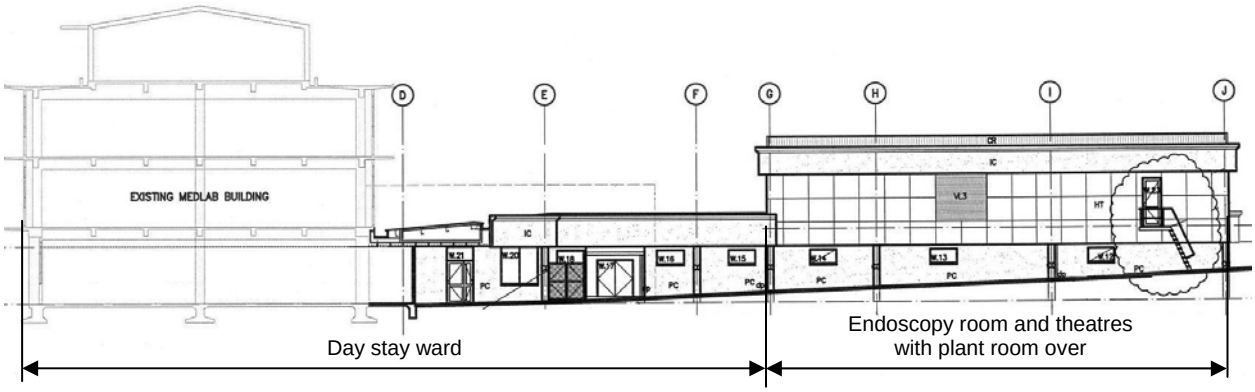

Figure 1: Section through the original building and South elevation of the addition showing accommodation

1 The matters to be determined

1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004[1] ("the Act") made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing ("the Department"), for and on behalf of the Chief Executive of the Department. The applicant is the owner of the building, Anglesea Medical Properties Limited ("the applicant") acting through a firm of legal advisers ("the applicant's legal advisers"). The other parties are:

- the Hamilton City Council carrying out its duties and functions as a territorial authority or a building consent authority ("the authority")
- Braemar Hospital Limited, the tenant of the building ("the tenant") acting through a firm of legal advisers ("the tenant's legal advisers")
- the New Zealand Fire Service Commission, which has the right or obligation to give written notice to the territorial authority in respect of these matters.

[1] The Building Act 2004 is available from the Department's website at www.dbh.govt.nz.

1.2 I take the view that the matter for determination in terms of section 177(a)[2] of the Act is the code-compliance of building work subject to a building consent issued to the tenant for an alteration relating to the change of use of a hospital building.

1.3 The question that I must answer in regard to this matter is whether the building complies with Clause C (Fire Safety) of the Building Code[3] (Schedule 1 of the Building Regulations 1992) ("the Building Code"), and if not, whether it complied 'as nearly as was reasonably practicable'. In regard to this question, the applicant has listed the following specific areas of concern:

- The use of evacuation slings as a secondary means of escape.
- The operating theatres not being fire or smoke separated from each other and the services area above them.
- The ward being in the same fire cell as the lounge, kitchenette and consulting spaces.
- The tenancy not being designed for surgeons and patients to stay during an operation.
- The 12 patient limitation.

1.4 In making my decision, I have considered the submissions of the parties and the other evidence in this matter. However, I have not considered any other aspects of the Act or the Building Code. While I have carefully reviewed the parties' submissions and the various consultants' reports, I have only summarised the main points of this documentation in the body of the determination.

2 The tenancy

2.1 The area occupied by the tenants ("the tenancy") is situated in a mainly two-storey extension to a multi-storey building. The ground floor of the tenancy, which has been functioning as a day-stay hospital, is sub-divided into a series of areas associated with its use. The operations area consists of three theatres and an endoscopy room, with adjoining ancillary areas. There are two main recovery areas, and the remainder of the hospital consists of offices, storage, and reception areas. The first floor of the building forms what is described as a "Plant Room" on the drawings which I have described as a "services area" in this determination. The layout of the building is shown in Figures 1 and 2.

2.2 The main building, in which the tenancy is situated, is constructed with a combination of precast concrete wall panels and light-timber framed walls lined with selected external claddings. The intermediate floor is constructed with proprietary metal joists covered by 21mm construction plywood. The internal partitioning of the tenancy is generally timber-framed with plasterboard wall linings and certain of these walls, together with their associated doors, are fire-rated. The ceilings of the tenancy are lined with a proprietary suspended system.

[2] In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.
[3] The Building Code is available from the Department's website at www.dbh.govt.nz.

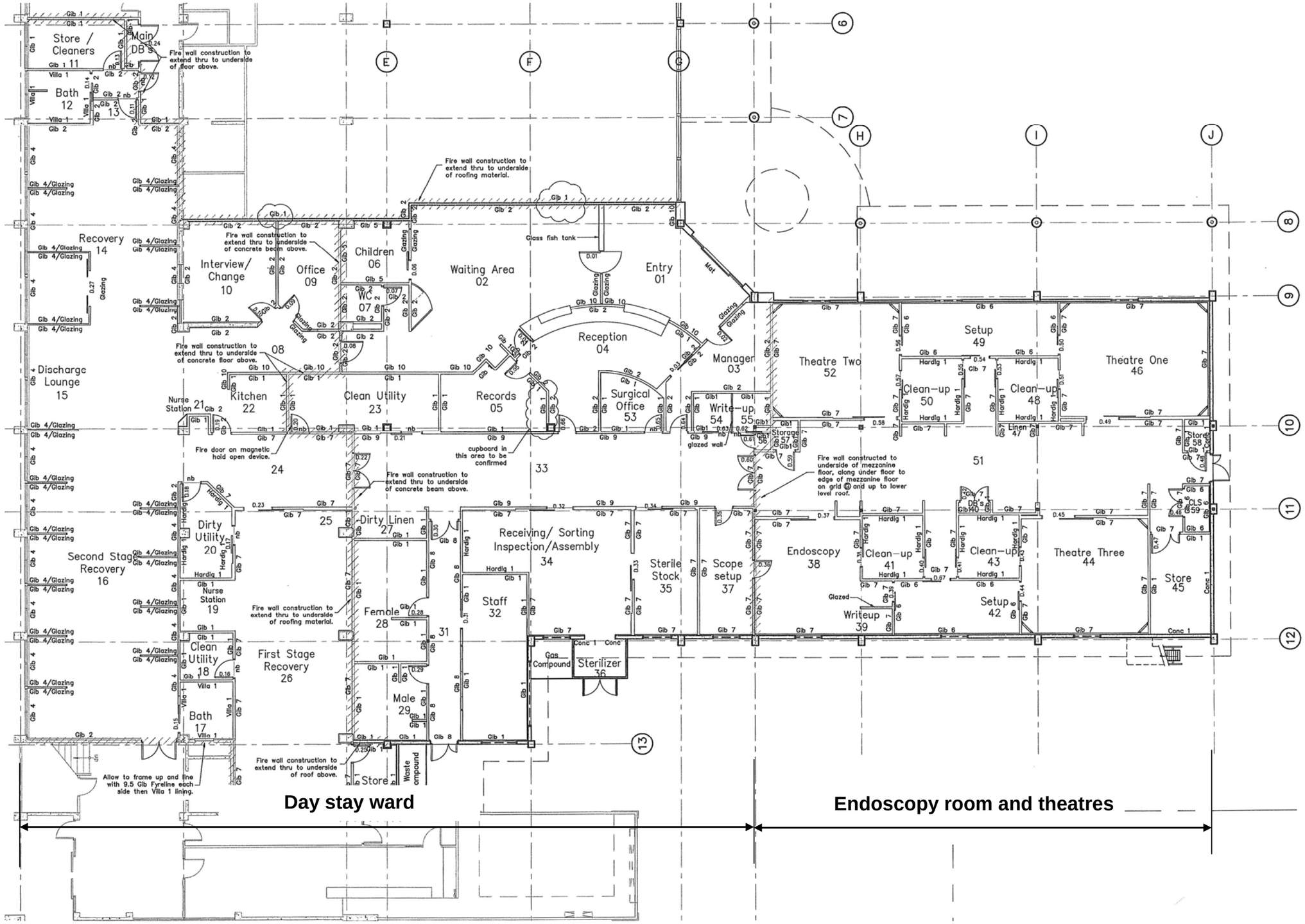

Figure 2: Ground floor fit-out plan showing the day stay ward, the endoscopy room and operating theatres

2.3 As originally designed, the tenancy falls within purpose groups WL to SC of the compliance document C/AS1, and at present is fitted with a type 7 automatic fire sprinkler system.

3. Background

3.1 Pre-April 2007 consent application

3.1.1 The applicant commissioned a firm of consultants to prepare a fire report regarding a proposed alteration and addition to an existing four-storey building. The consultant prepared a preliminary report ("the preliminary fire report") dated 25 January 2001, which concluded that with the proposed protection features, the objectives of the Building Code for means of escape and spread of fire would be met. The report also included the statement that the new separate single storey addition provides for:

> no sleeping accommodation, and [as] the theatres provide services similar to that of a doctor's office, it is categorised as between WL purpose group and SC purpose group.

3.1.2 The authority issued a building consent (No 174/2001) dated 22 March 2001, under the Building Act 1991 ("the former Act") to the applicants for the construction of a "Building Shell for Future Medical Building – Stage 1".

3.1.3 The authority issued a building consent (No 421/2001) dated 23 April 2001, under the former Act to the tenants for a "Fitout for Medical Day Stay Clinic".

3.1.4 The authority issued a final code compliance certificate dated 4 September 2001 in respect of consent No 421/2001.

3.1.5 The authority issued a final code compliance certificate dated 21 May 2002 in respect of consent No 174/2001.

3.2 The 2007 consent application

3.2.1 Following discussions between the applicant's and the tenant's legal advisers and the authority, the authority wrote to the applicant on 19 October 2006, confirming the discussions and noting that the original building was classified WL. If it was planned to change the building to allow for an overnight stay, then the classification would change to SC. This would then require an application for a change of use under section 114.

3.2.2 An authority officer swore an affidavit on 26 October 2006, confirming that the use at that time was WL. It was considered that the preliminary fire report was insufficient to support a building consent application. If the tenancy became an overnight stay facility then the authority may have to issue a notice to fix, or classify the building as being dangerous.

3.2.3 An Independent Qualified Person swore an affidavit on 24 October 2006. The affidavit stated that overnight stays as opposed to daylight stays were not considered to be a change of use, nor were there any issues arising in respect of non-compliance with the Act or the Building Code.

3.2.4 A fire consultant engaged by the applicant ("the applicant's fire consultant") swore an affidavit on 30 October 2006, which took issue with some of the comments made by the Independent Qualified Person. The affidavit concluded that the preliminary fire report did not allow for a full SC purpose group, which would be required if the tenancy provided for overnight accommodation facilities. Instead, the preliminary fire report allowed for a purpose group between WL and SC. Irrespective of whether or not a Type 7 alarm system was provided, further requirements relating to egress routes and fire separations would require investigation and likely upgrading to meet SC purpose group requirements.

3.2.5 In a letter to the applicant's legal advisers, dated 31 October 2006, the applicant's consulting engineers noted that the preliminary fire report had established that the tenancy did not address compliance for overnight sleeping accommodation. In addition, such overnight care would constitute a change of use in terms of section 115. I note that the author of the letter was also the author of the preliminary fire report described in paragraph 3.1.1.

3.2.6 On 8 November 2006, the tenant's legal advisers wrote to the authority stating that the tenant wished to medically treat patients who would be recovering from operations overnight and who would have a total overall stay of less than 24 hours.

3.2.7 The applicant's legal advisers responded to the proposals made on behalf of the client and concluded that there must be an application made to the authority for a change of use of the premises.

3.2.8 The tenant's legal advisers wrote to the authority on 10 November 2006 raising issues that could be summarised as being that:

- the premises were within the SC purpose group
- even if the premises were not correctly designated for SC use, there was nothing in the proposed change of recovery/sleeping time that would make that activity different from the procedures used over the past 5 years.

3.2.9 In a letter to the applicant's legal advisers dated 22 November 2006, the authority noted that it had received a request from the tenants to operate a night-time hospital service from the tenancy. The authority had accepted that the initial approval was on the basis of an alternative solution that took into account that no overnight sleeping accommodation would be provided. The authority accepted the comments raised in the reports of the firm of consulting engineers and the applicant's fire consultant, which had disputed some aspects of the preliminary fire report. The authority was of the opinion that the current level of compliance of the tenancy could be addressed through an application for a change of use.

3.2.10 The territorial authority wrote to the tenant's legal advisers on 30 November 2006, acknowledging the legal advisers' contention that there was no difference between day and night activities for an SC purpose group. The authority agreed that the purpose group was definitely not a CL purpose group, nor strictly a WL one. The authority approved the current systems as being an alternative system, on the basis that the tenancy was to be a "day stay" hospital. Due to the uncertainty surrounding the then current situation, the authority favoured an inspection by a fire consultant to

determine whether the current fire-safety systems met the minimum requirements of an SC purpose group.

3.2.11 The authority wrote to the applicant's legal advisers on 3 January 2007, noting that it had visited the premises and confirmed that the premises needed to be classified as a full SC purpose group. The authority was concerned that the current level of hospital care, which included operations undertaken with general anaesthetics, was more than was contemplated when the tenancy was approved on the basis of a purpose group between a WL and a SC.

3.2.12 Under a covering letter dated 15 April 2007, the tenant forwarded a building consent application and supporting documentation, including a "Report for Fire Safety" prepared by a firm of fire consultants ("the tenant's fire consultant") dated 7 February 2007 (Issue 1) and 14 February 2007 (Issue 2). The report:

- raised some issues regarding the means of escape
- recommended that the Type 6 automatic fire sprinkler system be replaced with a Type 7
- required penetrations to be fire-stopped.

3.2.13 The tenant's fire consultant wrote to the tenant on 30 March 2007 and concluded that, as the services area in the roof void of the tenancy was a "services room" which was within the IA purpose group, it did not require fire separation from the rest of the building. The area could not be classified as an ID purpose group, and as it did not meet the requirements of C/AS1, it was not a plant room.

3.2.14 The authority also engaged the fire consultant, who was later engaged by the applicants, to peer review the Report for Fire Safety and correspondence took place between the author of the report and the applicant's fire consultant from 5 May 2007 to 23 May 2007. The authority then referred the design proposal to the New Zealand Fire Service ("the Fire Service") for comment in terms of section 46.

3.2.15 The Fire Service produced a "Building Memorandum" dated 31 May 2007, that listed 8 recommendations regarding the proposed building consent.

3.2.16 The tenant wrote to the authority on 20 June 2007, listing the types of surgical specialities performed at the day hospital. According to this letter, it was the tenant's intention to provide an extended period for patients that might include an overnight stay. The staff-to-patient ratios were most likely to be better than those provided under current conditions and the number of patients per overnight stay would not exceed 12. The tenant also attached letters of support from various surgeons, managers and technicians regarding the viability of the use of evacuation slings in emergency situations.

3.2.17 The applicant's fire consultant emailed the authority on 2 and 4 July 2007, expressing concern about the use of evacuation slings to evacuate patients during an evacuation of the tenancy.

3.2.18 Correspondence took place on 16 and 17 July 2007 between the applicant and the authority about the evacuation plan prepared by the tenants. The applicant had

concerns regarding the proposed method of evacuating the operating theatres in an emergency. The authority also attached the letters of support provided by the tenant and which are described in paragraph 3.3.16.

3.3.19 The Fire Service's Senior Fire Safety Officer for the Hamilton District wrote to the applicant on 23 July 2007, stating that approval would be given for the use of evacuation slings as an alternative solution for the evacuation of patients from the operating theatres. This opinion reversed the officer's earlier advice that the Fire Service would not approve this method of evacuation.

3.2.20 The authority issued a building consent (No 2007/18079) dated 24 July 2007, under the current Act that was entitled:

> Braemar Medical – upgrade fire systems to bring tenancy to SC.

3.2.21 On 3 September 2007, a firm of fire protection engineers issued a producer statement confirming that a type 7 fire alarm system had been installed in the tenancy and that it complied with the Building Code.

3.2.22 The applicant commissioned a firm of fire and safety consultants ("the applicant's second fire consultant") to assess the suitability of the fire design submitted for building consent and to comment on the authority's grounds for acceptance. The applicant's second fire consultant produced a report dated 20 December 2007, which noted that the report by the tenant's fire consultant did not confirm the construction of certain existing elements or why it was not reasonably practicable to upgrade them to full compliance. The report also expressed concerns about the second means of escape from the theatre wing using evacuation slings, which was a departure from the Acceptable Solution. In addition, the report considered that insufficient consideration was given to the non-compliance of the existing construction around the theatres. The report concluded that, taking into account the upgrading of the tenancy that had occurred, the authority would be justified in issuing the code compliance certificate.

3.3 The Determination

3.3.1 The Department received the application for a determination on 3 September 2007. However, the Department did not receive the applicant's supporting evidence until 15 May 2008, the authority's submission until 20 June 2008, the tenant's completed submission until 22 August 2008, and a written submission from the applicant on 27 September 2008. The various submissions are described in paragraph 4.

4. The submissions

4.1 The applicant's submission

4.1.1 The applicant's legal advisers made an initial application dated 31 August 2007, that summarised the matters at issue.

4.1.2 The applicant's legal advisers prepared a submission dated 13 May 2008 on behalf of the applicant. The applicant's position being that the authority erred in accepting the tenant's application for a change of use as complying "as nearly as is reasonably

practicable" with the Building Code requirements relating to means of escape from fire. In terms of a "weighting" exercise, the "possible sacrifices" in achieving compliance with the Building Code could not be regarded as outweighing considerations of human safety. The submission set out the background to the dispute and described what they considered to be the relevant law.

4.1.3 The submission noted that based on the applicant's fire consultant's report there were many areas of the design that were non-compliant and then went on to describe and analyse the applicant's five main areas of concern, which I list as being:

- The use of evacuation slings as secondary means of escape.
- The operating theatres are not fire or smoke separated from each other and the services area.
- The ward is in the same fire cell as the lounge, kitchenette and consulting spaces.
- The tenancy is not designed for surgeons and patients to stay during an operation.
- The 12 patient limitation.

4.1.4 In conclusion, the submission noted that the reports of both of the applicant's fire consultants agreed that the authority did not have reasonable grounds to accept the tenancy fire design as complying "as nearly as is reasonably practicable" with the Building Code. It was also suggested that the authority had not carried out a benefit versus sacrifice analysis. The Department was requested to amend the building consent to provide for such upgrades as deemed necessary in order to comply "as nearly as is reasonably practicable" with Clause C2.

4.1.5 Attached to the applicant's submission was a copy of a "Report to Support Determination Application" dated 17 March 2008 prepared by the applicant's fire consultant. The report set out the consultant's prior involvement in the matters in question, including the peer review of the report provided by the tenant's fire consultant described in paragraph 3.2.12. It was noted that the consultant had concerns regarding the tenant's fire consultant's report that has not been resolved. The report then listed the five concerns described in paragraph 4.1.3, emphasising in particular the use of evacuation slings, and went on to describe in detail how the concerns were justified.

4.1.6 Included in the documentation provided by the applicant's fire consultant, were two letters from a major public hospital dated 18 and 31 January 2008. These indicated that this particular hospital would only use evacuation slings as a last resort; as the slings required a large number of personnel to successfully handle each sheet.

4.1.7 The applicant's fire consultant produced a second "Determination report" dated 8 May 2008, which reiterated the comments in the previous report and also provided a timeline.

4.1.8 The applicant also forwarded copies of:

- the building consent No 2007/18079

- the preliminary report dated 25 January 2002
- the opinion of the applicant's consulting engineer dated 31 October 2006
- the reports dated 7 and 14 February 2007 by the tenant's fire consultant
- the report dated 20 December 2007 by the applicant's second fire consultant
- the Fire Service "Building Memorandum" dated 31 May 2007
- the two reports of 17 March and 8 May 2008 by the applicant's fire consultant
- the correspondence between the parties
- the correspondence from the Fire Service and various consultants
- the correspondence from various organisations regarding the installation or inspection of certain building elements.

4.2 The applicant's submission in response

4.2.1 The applicant's legal advisers produced a further submission dated 23 September 2008, in response to the submissions provided by the tenant and the authority. This summarised the tenant's arguments relating to the use of evacuation slings and reiterated the issues that the applicant considered should have been decided by the authority. The applicant did not accept that the premises as currently constructed were code-compliant.

4.2.2 Nor, said its legal advisers, did the applicant accept that it was necessary to have a corridor along the outside of the building or that it provided any additional benefits. A quantity surveyor had advised that the cost of an egress route without a corridor would be in the order of $15,000. The tenant had not shown that it could not meet the alteration costs that it had supplied.

4.2.3 The submission also argued against the use of the evacuation slings. In this respect, reference was made to a recent emergency evacuation from premises adjacent to the tenancy which was described in more detail in the statements attached to the submission. This incident raised further concerns regarding the suggested means of evacuation, especially in regard to the time taken to evacuate a patient. Also as the tenant had accepted that more than 12 patients could be within the ward area at one time, the ward area should be divided into separate fire cells.

4.2.4 The submission also took issue with the authority's acceptance that only minor surgery would be undertaken. It had come to the applicant's attention that more involved surgery was taking place and this had a direct bearing on the level of fire safety required for the tenancy. In addition, the authority's reliance on the advice it had received regarding the 12-patient limit was misplaced.

4.2.5 A supporting statement from the applicant's fire consultant dated 18 September 2008 was attached to the submission. This discussed the matters arising from the use of evacuation slings and the concerns regarding the incident occurring at the adjacent building described in paragraph 4.2.3. In the consultant's opinion, the use of the slings was not as safe as the evacuation of patients in a bed, as set out in C/AS1. The tenant's statements that the separate theatre cells are not designed as places of safety

was contrary to the evacuation scheme submitted at the time of the building consent application. The latest fire design by the tenant's fire consultant does not have any fire or smoke separations between the individual theatres.

4.2.6 The consultant was of the opinion that the ward required to be separated from adjoining spaces if the current egress route were maintained. According to the consultant, the concerns raised by the theatre design, which did not allow staff to complete operations or to stabilise patients in the event of a fire alarm had been reinforced by the recent fire incident (refer paragraph 4.2.3). In addition, the costs submitted by the tenant were only relevant if a corridor was also constructed and this was also required to be fire-separated from the theatres themselves. Smoke from a fire entering the non-fire or non-smoke separated theatres would also compromise theatre sterility. The consultant did not accept that only patients who are sleeping or are bedridden are to be included in assessing the 12-patient limit advised by the tenant. If the patient limit were to exceed 12, then in the opinion of the consultant, it would be necessary to separate the ward area into separate fire cells.

4.2.7 A statement dated 11 September 2008 from the manager of the adjacent medical premises was also attached to the applicant's submission. This described in detail the emergency incident referred to in paragraph 4.2.3. As a result of a fire in the plant room above the operating theatres in question, smoke entered the theatres necessitating the reversal of the anaesthetic procedure being applied to one patient. The patient was also manually ventilated and disconnected from the all the attached equipment. In this instance, it took about 8 to 10 minutes to evacuate the patient, even though there were 4 surgeons in attendance and the patient was removed on the theatre bed. The manager was of the opinion that if an evacuation sling had to be used, it would have further complicated and delayed the process. It was also noted that the theatres in this case are constructed as separate fire cells, so if necessary, a patient can be transferred to an adjacent smoke-free theatre.

4.3 The tenant's submission

4.3.1 The tenant's legal advisers prepared a submission dated 19 August 2008 on behalf of the tenant. The submission described the background involving a commercial dispute between the applicant and the tenant. In noting the weighting that has to be given for the benefit/sacrifice criteria, it was submitted that this had been undertaken after an extensive consultation process. The tenant had to be treated the same as other industry participants and this was particularly relevant with regard to the use of evacuation slings.

4.3.2 The submission queried aspects of the report prepared by the applicant's second fire consultant (see paragraph 3.2.22) and set out a series of arguments that supported the use of evacuation slings. It was maintained that the use of these was a simple and safe way of evacuating patients in an emergency and that the applicant had not provided specific evidence that such use compromised patient safety. It was stated that the slings were used at the public hospital described in paragraph 4.1.6, contrary to the situation described by the applicant's fire consultant. There were sufficient staff on hand to use the slings efficiently, their use was supported by medical staff, and the slings would only be used in an emergency when it was impossible to use the access through the adjoining fire cells. In addition, the practical demonstration using

the evacuation slings completely satisfied the authority and the Fire Safety officer. If the external access way from the theatre block was widened, one car park would be lost resulting in an annual loss of revenue to the tenant of $1,825.

4.3.3 It was stated that estimated cost of $300,000 plus disruption costs to provide fire separation to the individual theatres was "not reasonably practical". In addition it was considered that existing smoke separation provisions would allow ample time for patients to be prepared for evacuation and to be evacuated. The submissions and consultant reports provided by the applicant regarding the ward fire separation were vague and did not set out what benefit accrued from this separation. It was unrealistic to provide a 60 minute fire separation to the ward and at least two safe egress routes. Evidence had been provided to show that other hospitals had theatres that were not designed as separate fire cells.

4.3.4 The submission noted that the authority was satisfied that the number of sleeping or bedridden patients in the tenancy would be self-limiting to 12 or less. A bed limitation to 12 beds would greatly hamper the tenant's operations and while there would be occasions where more than 12 patients would be present, some of these would be ambulatory. However, the tenant would be prepared to have its building consent made subject to a limit of 12 sleeping or bedridden patients present in the tenancy at one time.

4.3.5 The tenancy manager made a submission dated 8 August 2008 on behalf of the tenant. I summarise the main matters raised in this submission as follows:

Procedures undertaken at the tenancy

The submission attached a letter dated 20 June 2007 from the tenant to the authority, which clarified all the medical procedures performed at the tenancy.

Use of evacuation slings

The submission took issue with the applicant's report that had expressed doubts that the slings are not to be used for patients undergoing general anaesthetic procedures. The procedures used at another hospital were compared with the situation at the tenancy, which was fully described. It was the tenant's view that the use of the slings was a safe method of evacuation and that there would always be a sufficient number of staff on hand to safely use this method. The submission included attached letters supporting the use of the slings from anaesthetists that operated at the tenancy and from the manager of a public hospital.

Fire separations

In the tenant's opinion, the theatre block was not required to be designed to allow surgery to be carried on and completed during a fire in that block. Patients could be safely removed from the block should a fire occur and then triaged at a place of safety. The manager had researched the fire separation at other public hospitals and noted that these did not have fire separations for individual theatres. It was concluded that if these public hospitals did not require separate fire cells, then this should not be a requirement for the tenancy. Some outline drawings illustrating the fire separation at some public hospitals were attached to the submission.

4.3.6 The tenancy manager provided a further undated report regarding the 12-patient limitation. This described the processes regarding the operating procedures and stated that 16 beds in the ward area would be the absolute minimum needed to ensure the efficient processing of patients. The movement of patients through the hospital was carefully planned and there was no prospect that there would be more than 12 patients at one time who would be bedridden and thus unable to leave the hospital on foot.

4.3.7 The tenant forwarded a report from the tenant's fire consultant dated 11 August 2008, which initially set out the background and processes that had been carried out relating to the matters in question. The report also claimed that the author of report of 20 December 2007 prepared by the applicant's second fire consultant (see paragraph 3.2.21) did not have practical knowledge of the building". The report went on to discuss the main issues and I summarise these in the following sections:

Use of evacuation slings

It was noted that following a practical demonstration of the use of the slings, the Senior Fire Officer, who had attended the demonstration, was satisfied that the use of slings was an alternative solution and was more than acceptable under the Fire Safety Evacuation of Buildings Regulations 2006. It was submitted that, as the applicant's consultants had not attended the demonstration, they could not reliably comment on the effectiveness of the use of the slings.

Fire/smoke separations

The floor separating the service area from the theatre wing was described as achieving a minimum 15 minute FRR and the theatre fire cell separation from the adjacent fire cell as achieving a 30-minute separation. In addition the storage and electrical cupboards had been upgraded with appropriate fire-rated board linings and the use of brush-strip smoke seals were to be installed on the cupboard doors. It was concluded that the combination of the existing automatic sprinkler system and the installation of a new smoke detection system provided adequate fire protection. The grilles in the services area would also act as natural smoke ventilators. On balance, it was considered that the present active and passive fire protection and the separation were acceptable and there was no benefit in carrying out a cost/benefit analysis regarding a full remedial programme.

The current positive pressurised systems above the theatres ensured that smoke from an adjacent space could not enter the theatre. As activation of the smoke detection system shuts down the air handling units, this minimises the risk of smoke being forced into adjacent spaces. The minimal volume of smoke caused by a fire in any theatre that could enter the corridor would not impede the means of escape from the theatres.

Evacuation from the theatre block

It was considered that the applicant's consultant's opinion, that should a fire break out in the theatre fire cell, all theatres had to be evacuated immediately, was unrealistic. Rather, should a fire break out in adjacent theatres or spaces, the fire protection and evacuation procedures that are in place would allow the surgeons

sufficient time to prepare a patient and evacuate the theatre before the escape routes were compromised.

Lounge, kitchenette and consulting spaces

It was essential to keep the two nurses' stations open and they could be considered as being "a FHC1". The kitchenette is now correctly designated as a "tearoom" and the cooking facilities in the staffroom are contained within a separate fire cell. There was no perceived life safety advantage in upgrading the structure of the two consulting rooms to achieve a 30/30/30 fire separation. However, the installation of smoke seals on the doors to these areas ensured adequate smoke separation.

Conclusion

The submission concluded that the "as nearly as is reasonably practicable" approach had been adopted after considering the results of a series of site visits and consultation with various consultants.

4.3.8 Following a request from the Department, the tenant's legal advisers wrote to the Department on 11 July 2008, attaching a quantity surveyor's report on the costs relating to remedial work that could be carried out on the tenancy. The submission stated that an additional corridor had been included in the costings relating to the egress doors. It was also queried whether permission would be granted by the landlord or the authority for major structural alterations. It was also noted that some of the proposed work would disrupt the running of the tenancy leading to a significant loss of revenue. As the value of this loss was considered to be information confidential to the tenant, the tenant preferred not to disclose this value. Finally, the construction of fire wall separating the first recovery area from other areas would "compromise the ability of nurses to hear, observe and serve patients in first-stage recovery".

4.3.9 The quantity surveyors report, which was subject to a number of assumptions and exclusions provided the following "Rough Order of (Construction) Costs":

Provide egress doors to the outside from each three operating Theatres plus the Endoscopy Room (Rooms 38, 44, 46, and 52).	$300,000
Provide 60/60/60 firewall, at ground floor level only, to separate the Theatre Suite from the remainder of the Hospital (along a line generally between spaces 03 and 52, 33 and 51, and 37 and 38).	$75,000
Provide a 30/30/30 firewall to separate each of the three Operating Theatres and the Endoscopy Room from the adjacent spaces.	$300,000
Provide a 30/30/30 firewall to separate the First Stage Recovery area from the adjacent Recovery and Second Stage Recovery areas.	$125,000
Total (excluding GST)	**$800,000**

4.3.10 The report also noted that a separate costing of $6,400 plus GST had been obtained by the tenants for minor adjustments to the existing retaining wall adjacent to gridline J between gridlines 10 and 11. This work would provide greater manoeuvrability width as an alternative solution for Theatre egress.

4.4 The authority's submission

4.4.1 The authority prepared a submission dated 20 June 2008 that set out the background to the dispute. The authority responded to the concerns raised by the applicant and noted that it had to approach the building consent application on the basis of alternative solutions. Once the authority became aware that more extensive surgery was being carried out at the tenancy, it took action to ensure that the building became code-compliant.

4.4.2 The submission noted that the authority had engaged a consultant to peer review the report prepared by the tenant's fire consultant and the Fire Service had approved the theatre evacuation procedures. The authority had conducted a "robust and thorough" process throughout, had initiated a peer review, and was entitled to approach the consent on an alternative solution basis.

4.4.3 The authority forwarded copies of:

- building consents Nos 174/2001, 421/2001, and 2007/18079
- code compliance certificates in relation to building consents Nos 174/2001 and 421/2001
- some compliance schedules and statements of fitness
- the affidavits of the Indpendent Qualified Person and the applicant's fire consultant's
- the preliminary fire report dated 25 January 2002
- the consulting engineer's opinion dated 31 October 2006
- the reports dated 7 and 14 February 2007 by the tenant's fire consultant
- the correspondence between the parties
- the correspondence from the Fire Service and various consultants
- the correspondence from various organisations regarding the installation or inspection of certain building elements.

5. The legislation and the compliance documents

5.1 Relevant provisions of the Act include:

> **19 How compliance with building code is established**
>
> (1) A building consent authority … must accept any or all of the following as establishing compliance with the building code:
>
> (b) compliance with the provisions of a compliance document . . .
>
> **67 Territorial authority may grant building consent subject to waivers or modifications of building code**
>
> (1) A building consent authority that is a territorial authority may grant an application for a building consent subject to a waiver or modification of the building code.

114 Owner must give notice of change of use, extension of life, or subdivision of buildings

(1) In this section and section 115, change the use, in relation to a building, means to change the use of the building in a manner described in the regulations.

(2) An owner of a building must give written notice to the territorial authority if the owner proposes—

(a) to change the use of a building; or . . .

115 Code compliance requirements: change of use

An owner of a building must not change the use of the building,—

(a) in a case where the change involves the incorporation in the building of 1 or more household units where household units did not exist before, unless the territorial authority gives the owner written notice that the territorial authority is satisfied, on reasonable grounds, that the building, in its new use, will comply, as nearly as is reasonably practicable, with the building code in all respects; and

(b) in any other case, unless the territorial authority gives the owner written notice that the territorial authority is satisfied, on reasonable grounds, that the building, in its new use, will—

(i) comply, as nearly as is reasonably practicable, with every provision of the building code that relates to either or both of the following matters:

(A) means of escape from fire, protection of other property, sanitary facilities, structural performance, and fire-rating performance:

(B) access and facilities for people with disabilities (if this is a requirement under section 118); and

(ii) continue to comply with the other provisions of the building code to at least the same extent as before the change of use.

5.2 Relevant provisions of the Building Code include:

Clause C2—MEANS OF ESCAPE

OBJECTIVE

C2.1 The objective of this provision is to:

(a) Safeguard people from injury or illness from a fire while escaping to a safe place, and

(b) Facilitate fire rescue operations.

Clause C3—SPREAD OF FIRE

OBJECTIVE

C3.1 The objective of this provision is to:

(a) Safeguard people from injury or illness when evacuating a building during fire.

(b) Provide protection to fire service personnel during fire fighting operations.

(c) Protect adjacent household units, other residential units, and other property from the effects of fire.

(d) Safeguard the environment from adverse effects of fire.

5.3 The relevant performance statements deriving from these objectives are incorporated in Clauses C2.3 and C3.3. I note that the tenant is required to satisfy these latter performances in order to comply with the Building Code. The relevant provisions of the Acceptable Solution C/AS1 amount to a means of compliance with the performance requirements of Clause C2 and C3.

5.4 Relevant provisions of C/AS1 are:

Plant, boiler and incinerator

6.11.3 Within a building any space (see Figure 6.3) containing an incinerator, plant, boiler or machinery which uses solid fuel, gas or petroleum products as the energy source, (but excluding space heating appliances), shall be a separate firecell with a rating of F60, or F90 if the adjacent firecells contain SC and SD purpose groups…

5.5 Relevant provisions of the Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005 include:

5 Change the use: what it means

For the purposes of sections 114 and 115 of the Act, change the use, in relation to a building, means to change the use (determined in accordance with regulation 6) of all or a part of the building from one use (the old use) to another (the new use) and with the result that the requirements for compliance with the building code in relation to the new use are additional to, or more onerous than, the requirements for compliance with the building code in relation to the old use.

6 Uses of buildings for purposes of regulation 5

(1) For the purposes of regulation 5, every building or part of a building has a use specified in the table in Schedule 2.

(2) A building or part of a building has a use in column 1 of the table if (taking into account the primary group for whom it was constructed, and no other users of the building or part) the building or part is only or mainly a space, or it is a dwelling, of the kind described opposite that use in column 2 of the table.

Schedule 2

Uses of all or parts of buildings

Uses related to sleeping activities		
Use	**Spaces or dwellings**	**Examples**
CS (Crowd Small)	enclosed spaces (without kitchens or cooking facilities) where 100 or fewer people gather for participating in activities	cinemas (with qualifying spaces), . . . daycare centres . . .
CL (Crowd Large)	enclosed spaces (with or without kitchens or cooking facilities) where more than 100 people gather for participating in activities, but also enclosed spaces with kitchens or cooking facilities and where 100 or fewer people gather for participating in activities	cinemas (with qualifying spaces), schools, . . .
SC (Sleeping Care)	spaces in which people are provided with special care or treatment required because of age, or mental or physical limitations	hospitals, or care institutions for the aged, children, or people with disabilities
SR (Sleeping Residential)	attached and multi-unit residential dwellings, including household units attached to spaces or dwellings with the same or other uses, such as caretakers' flats, and residential accommodation above a shop	multi-unit dwellings, flats, or apartments

6. The site inspection

6.1 Two representatives from the Department, one of whom is a Chartered Professional Engineer ("the engineer"), conducted a site inspection of the tenancy on 6 August 2008. Also in attendance were the legal advisers to the applicant and tenant, an officer from the authority, the tenancy manager and the applicant's property manager.

6.2 The site visit enabled the engineer to fully inspect those areas of the tenancy that were relevant to this determination and to clarify details as necessary to assist me in the preparation of this determination.

7. The draft determination

7.1 Copies of a draft determination were sent to the parties for comment on 30 October 2008.

7.2 The applicant accepted the draft determination but requested that two minor amendments be made. The authority accepted the draft without comment.

7.3 The tenant forwarded a response that was received by the Department on 3 December 2008. I summarise this response as follows:

Single complying means of escape from the operating theatres

The tenant had conducted trial evacuations through the existing doors and access way using a wheeled ambulance bed and these showed that a patient could be

"smoothly and efficiently manoeuvred…out of the existing doors and along the external corridor". The tenant requested that consideration be given to whether the availability of an ambulance bed in each theatre would be an acceptable alternative solution rather than the widening of the existing doors and external access way.

Fire/smoke separation between theatres

In regard to paragraph 7.3.2, (now renumbered paragraph 8.3.2), the submission described how the smoke-separation of the theatres was achieved by the systems already in place. On the basis that minimal air gaps are required in each theatre to maintain positive pressure from the air inflow system, it was not proposed to fit complete smoke-stop seals on the theatre doors.

Ward in same fire cell as lounge, kitchenette and consulting spaces

The tenant accepted the draft determination in this respect.

Tenancy not designed for surgeons and patients to stay during an operation

The tenant accepted the draft determination in this respect.

12 patient limitation

The tenant did not accept the draft determination in regard to this matter. It was submitted that the determination had treated C/AS1 as a legal requirement, which in the tenant's opinion, it was not. The premises should be treated as an alternative solution on the basis "that given the use of the premises there will never be more than 12 or more persons accommodated in the fire cell who are asleep and unable to leave on foot in the event of an emergency". Consideration was required to be given to the fact that the majority of patients accommodated in the ward at any one time are likely to be awake and able to walk. Given that patients can be evacuated into adjacent fire cells using a single route, the 20-bed limit described in Clause 6.6.3 of C/AS1 was a more appropriate benchmark than the 12-bed limit.

7.4 The applicant responded to the tenant's response in a submission to the Department dated 18 December 2008. I summarise this response as follows:

Single complying means of escape from the operating theatres

The applicant was unable to comment on the various aspects concerning the use of a wheeled ambulance bed. However, it was noted that the tenant's primary approach had always been the use of the evacuation slings.

12 patient limitation

The applicant did not accept the tenant's submission that it was justifiable to accept the building layout as an alternative solution, as its business was not a "worst-case scenario" within the scope of C/AS1. The applicant was of the opinion that based on the working of the tenancy; the tenant's business was no different from any other group within the SC category.

With regard to the option to limit the occupancy of the fire cell to 12 patients, the applicant submitted that the options available to the Department were to require :

- the ward and recovery area to be separated into two fire cells, or
- the premises to redesigned to ensure that they are only capable of accommodating 12-bed spaces in total in the ward and recovery areas.

If the tenant wished to restrict the patient numbers to 12, then there should be no concerns with either of the two options.

7.5 On 19 December 2008, the tenant forwarded details and plans of other hospitals that did not fully comply with the bed limit numbers set out in C/AS1. It was noted that these examples illustrated that the C/AS1 bed number limitations are often exceeded in real practice.

7.6 The applicant's fire consultant emailed the applicant's legal advisors on 22 December 2008. The consultant was of the opinion that comparisons with other non-compliant hospitals did not mean that the tenancy was compliant. The issue was whether the tenancy itself complied, and there was no information provided by the tenant as to the fire engineering designs of the listed hospitals. The provision of partial designs of other buildings with more than 12 beds in a ward did not mean that it was acceptable for the tenant not to comply with the requirements of the Building Code.

7.7 I have carefully considered the above responses regarding the draft determination and have amended the draft as I consider appropriate.

8. Discussion

8.1 General

8.1.1 The applicants have listed five main concerns where it was considered that certain areas of the existing design do not comply with the requirements of C/AS1, and I have set out the arguments and discussion relating to each in turn under the headings described by the applicant.

8.1.2 If building work is considered to be a change of use in terms of section 114, which is the case regarding the latest building consent issued for the tenancy, it is to be subject to the following criteria:

(a) Under section 115(b), the authority may issue a written notice for work that does not comply completely with the means of escape from fire requirements, provided that it is satisfied that after the change of use, the building in its new use will comply with those requirements "as nearly as is reasonably practicable".

(b) Under section 177(d), the Chief Executive may make a determination in relation to a building consent issued under sections 115 to 116, and under section 188 such a determination may incorporate waivers or modifications of the accessibility requirements.

8.1.3 In previous determinations issued by the antecedent of the Department, the Building Industry Authority, an approach was established and discussed regarding the question

of whether a building complies as nearly as is "reasonably practicable" with particular provisions of the Building Code. This approach involved the balancing of the sacrifices and difficulties of upgrading against the advantages of upgrading and follows the approach of the High Court[4].

8.1.4 I continue to hold the views expressed in the previous relevant determinations, and therefore have to conduct a sacrifice/ benefit analysis in respect of the tenancy.

8.1.5 As set out in paragraph 4.3.9, the tenant has provided a quantity surveyor's approximate costing of $800,000 to carry out certain alteration works. In addition a costing of $6,400 has been obtained by the tenant for work to retaining walls. These costs are all exclusive of GST. The tenant has also stated that the disruption to the functioning of the tenancy caused by the building work would result in high financial costs. However, for reasons relating to confidentiality, the tenant has not furnished me with any estimates as to these costs.

8.1.6 While the applicant has queried the need to provide a corridor, the quantity surveyors' estimates given on behalf of the tenant have not been questioned. Accordingly, I am prepared to accept the costs provided by the tenant in this respect. However, while accepting that there will be additional disruption costs to be faced by the tenant, the lack of information precludes me from including these in my analysis. I have set out the break-down of costs, exclusive of GST, that I have received against each of the areas described below.

8.1.7 The applicant has also produced a quantity surveyor's estimate of $15,000 for providing an egress route that did not include a corridor. For the reasons set out in paragraph 8.1.6, I am also prepared to accept this valuation.

8.1.8 Having summarised the cost of the sacrifices that would be borne by the tenant; I must now assess the benefits accruing from carrying out the proposed building works.

[4] *Auckland City Council v New Zealand Fire Service*, 19/10/95, Gallen J, HC Wellington AP 336/93.

8.2 Single complying means of escape from the operating theatres

8.2.1 The parties' arguments

The applicant	The tenant	The authority
As there is only one narrow door opening from the theatre area, the only means of escape from fire is through the tenancy itself. If the evacuation sling method of evacuation is used, problems could arise if an emergency occurred while an operation under general anaesthetic was being undertaken. In addition, there may be a lack of numbers or a lack of physical ability to enable persons to be removed by this method. The situation arising from a fire in an adjoining facility also had implications as to the time required to evacuate a patient undergoing an operation from a theatre.	The use of the evacuation slings is a safe method of evacuation and there would always be sufficient staff on hand to cope with this process. The tenant carried out a practical test of the use of the slings, which was observed by the Fire Safety Officer, who has subsequently approved this method of evacuation. Several letters of support from medical staff and outside sources were also provided. The tenant's fire consultant noted that the evacuation sling procedures had been approved by the Senior Fire Officer. In addition, if a fire broke out in the theatre fire cell, the procedures in place would allow surgeons sufficient time to prepare a patient and evacuate the theatre before the escape routes were compromised.	A practical demonstration had been carried out using the evacuation sling method. The system had been explained and patients would be able to be moved easily in a matter of minutes by the 5 people who would always be in attendance. The level of surgery would be minor, involving a 23-hour maximum length of stay. The authority also referred to the letters of support that had been received (See paragraph 3.2.16)
	The tenant has conducted trial evacuations using wheeled ambulance beds	
A solution to the evacuation problem would be to enlarge the one theatre area exit door and amend the adjoining retaining wall. When applying a sacrifice/benefit analysis, this would reduce the risk to patients for a minimal cost. The applicant provided a copy of a letter from a hospital board that raises concerns regarding the proposed evacuation system (See paragraph 4.1.6). The applicant provided a quantity surveyor's estimate of $15,000 to provide egress routes that do not include a protective corridor.	The quantity surveyors engaged by the tenant produced an estimated costing of $300,000 to provide egress doors from each of the theatres and the endoscopy room, together with a full-length egress corridor. An additional costing of $6,400 has also been provided for amendments to the existing retaining wall. The main costing includes the provision of a corridor running along the outside walls of the theatre block. The tenant also provided a cost of $1,850 per annum for the loss of one car park if the access way is widened.	

The Fire Service
As described in paragraph 3.3.19, the Fire Safety Officer stated that written approval would be given for the use of evacuation slings as an alternative solution for the evacuation of patients from the operating theatres.

8.2.2 My response

The site visit to the tenancy confirmed that there is no direct egress to the outside from the individual theatres. The exit comprises a set of one-and-a-half leaved doors opening directly from the end of the theatre suite onto a narrow access way, which runs at 90º from doorway. The width of this access way is restricted by the building supports and the retaining wall supporting the adjoining higher level carpark. It is therefore, too narrow for a trolley to be effectively manoeuvred through.

The alternative method of evacuation proposed by the tenant is the use of evacuation slings as described above. While in some circumstances this would be an appropriate method, I am not convinced, based on the evidence provided and the information that I have received from the manufacturer, that this is an ideal evacuation solution for the building in question. This opinion is reinforced by the empirical evidence provided by the applicant regarding the fire evacuation at the adjoining medical facility.

The estimated cost of $300,000 to provide an amended permanent egress includes the cost of a protective corridor, which has the main function of assuring a hygienic method of evacuation. However, the tenant's manager has stated that if the evacuation sling method is used, the patients would be taken to the adjoining carpark where they would be attended to in the open air. Based on this information, I do not accept that a protective corridor is required.

I do not see why the existing external access way could not be widened to accommodate theatre trolleys, together with widened access doors from the end of the theatre block. This improved access would also ensure a smoother and more efficient transfer and evacuation if ambulances are required. Accepting that a corridor is not required should considerably reduce the costs that have been forwarded on behalf of the tenant. The tenant has indicated that a widening exercise would reduce the parking spaces by one. Accordingly, I consider that the egress costing of $15,000 provided by the applicant, together with the $1,850 annual loss of carparking revenue estimated by the tenant are relevant in determining the egress question. Taking these costings into account I am of the opinion that the benefits (the improved access), far outweigh the sacrifice (the cost).

8.3 The lack of fire or smoke separation between theatres and between the theatres and the services area

8.3.1 The parties' arguments

The applicant	The tenant	The authority
If the areas in question lack fire or smoke separation, a fire in one theatre could result in smoke being spread into the corridor and into other theatres. Based on the applicant's consultants' reports, the applicant was of the view that there has been no analysis in the fire design to prevent this occurrence, instead, an "as nearly as is reasonably practicable" analysis had been relied on.	The theatre block was not required to be designed to allow surgery to be carried on and completed during a fire in that block. The tenancy manager has produced evidence relating to the fire cell arrangement in other public hospitals, which showed that each theatre was not separately isolated from fire.	The discussions held with its peer reviewer regarding the fire and smoke separations noted that as full compliance could not be approved, alternative solutions had been accepted. The reasons for this approach were: • The specialised mechanical ventilation system in the theatres would be compromised if fire dampers were to be installed. • The room above the theatres was not considered to be a plant room. • Separation between the theatres was not considered to be necessary, taking into account that they were protected from any "at risk" areas by the removal of some higher risk activities.
It was considered that some upgrading should have taken place and the authority had failed to give the matter due consideration. The applicant requested that the Department consider whether full compliance should be required, or alternatively, what degree of upgrading would be required.	The tenant's fire consultant has described the various fire-rated features and considers that the existing active and passive fire and smoke protection, together with the separation features, provided adequate protection from the effects of a fire. In addition, the automatic shutting down of the air handling units minimised the smoke risk. The tenant's fire consultants' have also concluded that the first floor of the tenancy is a "services room" and not a "plant room".	The nature of the operations to be carried out was considered to be "minor" and the fire alarm system had been upgraded from a type 6 to a type 7.
	The quantity surveyors produced two costings totalling $375,000 to provide a variety of additional fire walls to separate the theatre block from the other areas and to give additional fire separation between the individual theatres.	

8.3.2 My response

As far as could be obtained from the visual inspection of the building during the site visit described in paragraph 6.1, the fire separation between the theatre suite and the main corridor is adequate. This separation included the sealing of the cable trays and the penetrations, and the installation of appropriate fire door sets. Accordingly, I am satisfied that this fire separation is code compliant.

The applicant's consultants maintain that the space above the theatres is "services area" rather than a "plant room". I note that the space in question contains a large compressor and three gas-fired water heaters, which leads me to the conclusion that the space is indeed a "plant room" in terms of paragraph 6.11.3 of C/AS1. Accordingly, the floor that divides the space from the SC purpose group area below requires a minimum 90 minute fire separation. The tenant's fire consultant has submitted that the floor/ceiling system in question achieves a "minimum 15 minute fire resistance rating". No evidence has been produced as to what construction standard the floor was installed to or to whether it has undergone any fire test.

However, I also note that the Type 7 automatic fire sprinkler system that has now been installed in the tenancy affords efficient active fire protection that in my opinion offsets the passive deficiency afforded by the floor system. I also note that the smoke ingress reported in the case of the fire in the adjacent building came through the air conditioning vents and not through the floor itself. Accordingly, I am prepared to accept that in applying the "on reasonable grounds" test, that the floor system as installed is acceptable as an alternative solution.

As regards the fire separation of the individual theatres, I note that the walls within the theatre block are not fire-rated. However, provided that the access from the theatres is upgraded as set out in paragraph 8.2.2, my only remaining concern relates to smoke separation. The indication on the plans that there is some separation of the theatres should be confirmed. In addition I have been informed that smoke stop seals are to be installed on the theatre doors. Therefore, in conjunction with improved exits from the theatres, I consider that sufficient time would be available to effectively stabilise and prepare a patient undergoing surgery for transfer and evacuation.

8.4 The ward is in the same fire cell as the lounge, kitchenette and consulting spaces

8.4.1 The parties' arguments

The applicant	The tenant	The authority
Although the ward should be fire separated from the other areas, this factor had not been considered adequately by the authority. One of the applicant's consultants had confirmed that some measure of smoke and/or	The tenant's fire consultants, noted that the nurses' stations and the tearooms were low risk, the staffroom cooking facilities were within a separate fire cell, and the installation of door seals had minimised the smoke	The other spaces in the ward area should have been separated. However, in view of this, certain high risk activities had been removed, some smoke seals had been fitted, the alarm system had been

fire separation could be achieved. The applicant requested the Department to consider whether full compliance should be required, or alternatively, what degree of upgrading would be required.	risk.	upgraded, there are staff on site at all times and the store room was to be fire-separated.

8.4.2 My response

The site inspection of the building also established that the fire separation in the main corridor and in the corridor between the waiting room and the recovery area is adequate for the reasons set out in paragraph 8.3.2. Accordingly, I am satisfied that this fire separation is code compliant.

8.5 The tenancy is not designed for surgeons and patients to stay during an operation in a fire emergency

8.5.1 The parties' arguments

The applicant	The tenant	The authority
The tenancy design was such that surgeons cannot complete an operation or stabilise a patient if a fire emergency was to occur. Instead, while the patient should be immediately evacuated, this procedure was compounded by the use of evacuation slings and the lack of fire separation.	16 beds in the ward area would be the absolute minimum needed to ensure the efficient processing of patients. There was no prospect that there would be more than 12 patients at one time who would be bedridden and thus unable to leave the hospital on foot. The tenant would be prepared to have its building consent made subject to a limit of 12 sleeping or bedridden patients present in the tenancy at one time.	A staged evacuation system was in place and egress was primarily through the next fire cell. As a last resort evacuation slings would be used to safely remove patients.

8.5.2 My response

I consider that my comments regarding the fire separation of the theatres set out in paragraph 8.3.2 are relevant to this matter. There I considered that the improved exits from the theatres and the smoke-stop provisions would allow sufficient time to effectively stabilise and prepare a patient undergoing surgery for transfer and evacuation.

8.6 The 12-patient limitation

8.6.1 The parties' arguments

The applicant	The tenant	The authority
In order to comply with C/AS1, if the 12-patient limit is exceeded, the wards needed to be separated into individual fire cells. The consent had not recognised the 12-patient limit and there were no procedures in place to ensure that the limit would be enforced. The fire-design drawing indicated 22 beds and 4 recliner chairs being situated in the tenancy, which could accommodate more than the limited number. The applicant requested that the Department require the tenant to reduce the number of beds and reclining chairs that were indicated on the drawings and also require that the consent be made conditional on a 12-patient limitation. Comparisons with other hospitals did mean that the tenancy was code-compliant. It was not accepted that the tenancy was any different from any other group within the SC category.	The 16 beds in the ward area would be the absolute minimum needed to ensure the efficient processing of patients. There was no prospect that there would be more than 12 patients at one time who would be bedridden and thus unable to leave the hospital on foot. The tenant provided a list of hospitals that did not comply with the bed limit numbers set out in C/AS1. The 20-bed limit as set out in Clause 6.6.3 was a more appropriate benchmark than the 12-bed limit.	While there was no specific reference on the building consent, the authority had received written confirmation by both the tenant's fire consultant and the tenant that patient limit would be 12.
	The quantity surveyors produced an estimated costing of $125,000 to provide a fire wall to separate the first and second stage recovery areas.	

8.6.2 My response

The recovery wing of the facility has more beds, including recliner chairs, than would normally be allowed for under the Compliance Document C/AS1. Therefore questions around the provision for means of escape need to be addressed in order to demonstrate that the occupants can evacuate to a safe place in an appropriate time. The tenant has confirmed that it does in fact have more occupants than previously stated. However, I am of the opinion that it makes no difference at all whether the occupants are ambulatory or not, they are still occupants of the ward, and therefore their presence there exceeds the limits of C/AS1. Separation of the ward into suites

containing no more than 12 occupants (beds or otherwise) would be required to fulfil my interpretation of the C/AS1 requirements.

I note that the tenant has provided an estimate of $125,000 to fire-separate the two recovery areas. I am of the opinion that this figure does not outweigh the benefits accruing from the provision of fire separation.

8.7 My response to the parties' submissions on the draft determination

8.7.1 I am concerned that storage of ambulance gurneys would be problematic within the confines of the theatre areas taking into account the relatively small floor areas and the associated hospital equipment.

8.7.2 I note that smoke separation is achieved by the positive pressurisation of the theatre space. However, as the supply of air is stopped when the alarm system is activated, smoke could enter the theatre space while the patient is being prepared for evacuation.

8.7.3 C/AS1 prescribes that the maximum occupancy of a single group sleeping area in purpose group SC is 12. However, this does not presuppose that all of the 12 beds contain bedridden patients. In general, when assessing an alternative solution against an approved document, it is necessary to provide some additional feature or features to offset the lack of a particular system or feature. Accordingly, as there is a lack of any offsetting feature provision, I cannot accept the tenant's proposal to increase the occupancy of the group sleeping area.

8.7.4 I have studied the examples provided by the tenant of other hospitals that do not fully comply with the occupancy requirements of C/AS1. However, I do not accept that these examples are relevant to the tenancy in question. I agree with the applicant's fire consultant that the tenancy has to be considered in the light of its own compliance.

9 Conclusion

9.1 In accordance with the discussion set out in paragraph 8, I have reached the following conclusions:

9.2 I accept that neither the use of evacuation slings nor the use of ambulance gurneys are appropriate procedures in this case to remove patients from the theatre block in the case of an emergency. Accordingly, the widening of the external access way and the end corridor egress door opening to accommodate theatre trolleys is necessary to meet the requirements of Clause C. This decision takes into account the "reasonably practicable" approach of balancing the benefits of this solution against the estimated costs.

9.3 As I consider that the fire separation in the main corridor and in the corridor between the waiting room and the recovery area is code compliant, the question of a separate fire cell is not an issue.

9.4 As I have reached the conclusion that the recovery wing will at times contain more than 12 patients, I have determined that the wards require separation into suites

containing no more than a maximum of 12 patients. In this instance I have again found that the estimated costs do not outweigh the benefits accruing from this decision.

9.5 I am satisfied that, provided the proposed smoke stop seals are installed, the fire and smoke separations between the individual theatres and the theatre and service areas that are present in the building are code-compliant This decision also includes the floor system installed between the plant room and the theatre block beneath it.

9.6 Based on the situation described in paragraph 9.5, I also accept that the tenancy design will allow for surgeons and patients to stay in a theatre for a sufficient length of time to effectively stabilise and prepare patients undergoing surgery so that they can be transferred and evacuated safely.

10 The decision

10.1 In accordance with section 188 I hereby determine that the tenancy as presently constructed does not comply as nearly as reasonably practicable with the Clause C of the Building Code.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 26 January 2009.

John Gardiner
Manager Determinations