

**DEVELOPMENT APPLICATION**

To:	Emma Pyett	Project:	140033.01
Company:	Built		
Email:	emmapyett@built.com.au	Version:	B
Date:	3 <sup>rd</sup> June 2022		
Subject:	Atlassian - SSDA 10405 Modification 3		

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Emma,

This letter is to advise that Holmes Fire has been engaged to provide fire engineering services for the proposed Atlassian Central development, to be located at 8-10 Lee Street, Sydney. This fire engineering statement is provided in support of the proposed modification to SSDA 10405, which is in relation to Levels 1 up to the roof level of the Atlassian development.

**1 INTRODUCTION**

The proposed Atlassian development will comprise a 44 storey building that is primarily used for Class 5 office occupancies, in addition to other occupancies such as YHA hostel accommodation (Class 3), retail (Class 6), carparking (Class 7a), storage (Class 7b), and assembly (Class 9b). The building will be located adjacent to the rail corridor of Central Station. The basement levels of the proposed building will also abut the basement levels of other properties such as the Adina hotel and Central Station.

**2 FIRE ENGINEERING PERFORMANCE SOLUTIONS**

Holmes Fire will be addressing fire engineering non-compliances that have been identified by the BCA consultant (Philip Chun) for the subject building, using performance-based fire engineering solutions which have been documented in the Fire Engineering Brief (140033.01.FEB01C version C, dated 4<sup>th</sup> February 2022). The performance-based solutions are to comply with the relevant Performance Requirements of the BCA. The design approach will be in line with the Australian Fire Engineering Guidelines<sup>1</sup> and other acceptable guideline documents.

The Performance Solution designs will be developed in line with BCA Clause A2.2, as applicable; i.e. complying with the relevant Performance Requirements or by equivalence comparison with the Deemed-to-Satisfy Provisions.

The following key modifications to the building design, that have an influence on the fire engineering design are:

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<sup>1</sup> Australian Building Codes Board, "Australian Fire Engineering Guidelines," Australian Building Codes Board, Canberra, 2021.

- The atriums on the north side of each of the habitats will be modified to now connect three interconnected floors, instead of four interconnected floors. The interconnection of three floors in lieu of four floors by the atrium is expected to improve the fire safety design of the building as it will reduce the likelihood of smoke spread between the office floors via the atriums, thereby enhancing the fire engineering strategy for the building. Preliminary CFD (Computational Fluid Dynamics) smoke modelling of the atriums within the office habitat floors have also been undertaken to inform the strategy to mitigate spread of smoke.
- Each of the timber habitat floors will be designed as internal fire separations between the levels. The soffits of the CLT (Cross Laminated Timber) floors within the interior office spaces will be provided with fire rated plasterboard. This would significantly increase the fire resistance of the CLT floors and overall fire resistance of the habitats and enhance the fire engineering strategy for the building.
- The structural frame of the megafloors and the exoskeleton will be fully fire rated; the robustness of the exoskeleton and habitat structure in fire is also further verified with structural fire engineering performance solutions utilising advanced non-linear structural fire analysis. Preliminary structural fire analyses have been undertaken utilising fire loads that are significantly higher than the actual fire loads anticipated within the building. These preliminary analyses have been able to verify that the building can maintain stability under severe fire exposure.

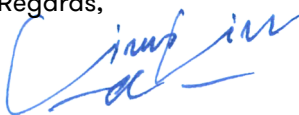
### 3 SUMMARY

Based on our review of the drawings of the proposed SSDA modifications, it is considered that the proposed modifications do not impact on the proposed fire engineering performance solutions. Additional non-compliances may be identified as the design is further developed; however it is considered that there are no significant issues that would affect the building layout nor impact on the current fire engineering strategy.

The information contained within this letter is based on the architectural drawings prepared by BVN, as listed in Appendix A.

Please do not hesitate to contact Holmes Fire, should there be any queries about the above.

Regards,



Linus Lim  
Technical Director

140033.01.DAL02b

## Appendix A

	Title	Issue
DA-10B-T01-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 1	9
DA-10B-T02-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 2	9
DA-10B-T03-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 3	9
DA-10B-T04-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 4	9
DA-10B-T05-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 5	9
DA-10B-T06-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 06	7
DA-10B-T07-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 07	5
DA-10B-T08-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 08	5
DA-10B-T09-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 09	5
DA-10B-T10-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 10	5
DA-10B-T11-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 11	5
DA-10B-T12-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 12	5
DA-10B-T13-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 13	5
DA-10B-T14-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 14	5
DA-10B-T15-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 15	5
DA-10B-T16-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 16	5
DA-10B-T17-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 17	5
DA-10B-T18-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 18	5
DA-10B-T19-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 19	5
DA-10B-T20-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 20	5
DA-10B-T21-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 21	5
DA-10B-T22-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 22	5
DA-10B-T23-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 23	5
DA-10B-T24-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 24	5
DA-10B-T25-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 25	5
DA-10B-T26-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 26	5
DA-10B-T27-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 27	5
DA-10B-T28-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 28	5

	Title	Issue
DA-10B-T29-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 29	5
DA-10B-T30-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 30	5
DA-10B-T31-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 31	5
DA-10B-T32-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 32	5
DA-10B-T33-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 33	5
DA-10B-T34-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 34	5
DA-10B-T35-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 35	2
DA-10B-T36-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 36	5
DA-10B-T37-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 37	5
DA-10B-T38-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 38	5
DA-10B-T39-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 39	5
DA-10B-T40-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 40	5
DA-10B-T41-01	GENERAL ARRANGEMENT PLAN TOWER LEVEL 41	5
DA-10B-T42-01	GENERAL ARRANGEMENT PLAN ROOF	5
DA-10C-XXX-01	NORTH ELEVATION	5
DA-10C-XXX-02	EAST ELEVATION	5
DA-10C-XXX-03	SOUTH ELEVATION	5
DA-10C-XXX-04	WEST ELEVATION	5
DA-10D-XXX-01	SECTION N-S	5
DA-10D-XXX-02	SECTION E-W	5
DA-11D-XXX-11	YHA SECTION -N-S	5
DA-11D-XXX-12	YHA SECTION -E-W	5
DA-11D-XXX-13	HABITAT SECTIONS	5
DA-11D-XXX-14	CROWN SECTION -N-S	5
DA-11D-XXX-15	CROWN SECTION -E-W	5
DA-40A-XXX-01	WALL TYPE DIAGRAMS -TOWER & SHED	5
DA-43E-TXX-01	TYPICAL ENCLOSURE SYSTEM -FWT-101A	5
DA-43E-TXX-02	TYPICAL ENCLOSURE SYSTEM -FWT-101B	5
DA-43E-TXX-03	TYPICAL ENCLOSURE SYSTEM -FWT-101B AT CROWN	2

	Title	Issue
DA-43E-TXX-04	TYPICAL ENCLOSURE SYSTEM -FWT-102	5
DA-43E-TXX-05	TYPICAL ENCLOSURE SYSTEM -FWT-103	5
DA-43E-TXX-06	TYPICAL ENCLOSURE SYSTEM -FWT-104A	2
DA-43E-TXX-07	TYPICAL ENCLOSURE SYSTEM -FWT-104A AT ATRIUM	1
DA-43E-TXX-08	TYPICAL ENCLOSURE SYSTEM -FWT-105A	5
DA-43E-TXX-09	TYPICAL ENCLOSURE SYSTEM -FWT-105B	5
DA-43E-TXX-10	TYPICAL ENCLOSURE SYSTEM -FWT-108	1
DA-43E-TXX-11	TYPICAL ENCLOSURE SYSTEM -FWT 401	1