## **Project Name:**

**Issue Date:** 

# **Build Aviator**

Project Number:	1234-1234
Project Name:	Build Aviator
Project Address	First Floor, Ross House Bury St Edmunds IP23 7AR
Client Name:	Build Aviator
Designer:	Elliot Ball
Service Level:	Building

26/01/2022



1st Floor Ross House Kempson Way Bury St Edmonds IP32 7AR

Tel: 01359 256311

**Email:** 

www.buildaviator.co.uk





## Build Aviator By Design

1st Floor Ross House Kempson Way Bury St Edmonds IP32 7AR

Tel: 01359 256311 Email: plandrawing@buildaviator.co.uk

## www.buildaviator.co.uk

Rev	Description	Date			
	Rev	Rev Description			



## **Build Aviator**

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First Floor, Ross House Bury St Edmunds IP23 7AR

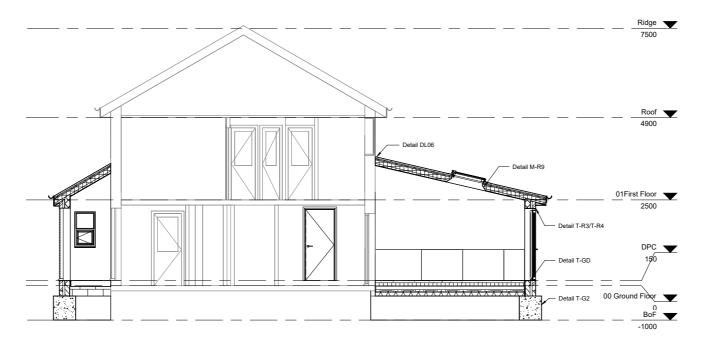
## Existing & Proposed Plans

**Build Aviator** 

1:50 DATE 26/01/2022

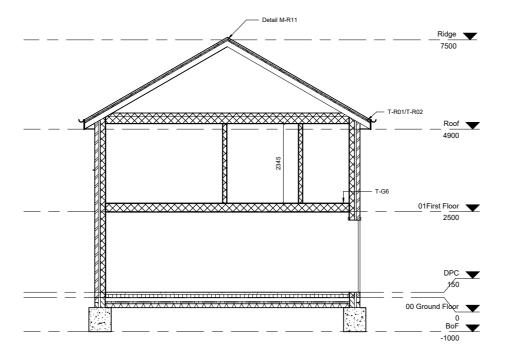
1234-1234-1234





Section A-A

1:50



2 Section B-B
1:50



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## **Build Aviator**

PROJEC

**Build Aviator** 

First Floor, Ross House Bury St Edmunds IP23 7AR

TITLE

Sections

CLIENT

**Build Aviator** 

1:50 DATE 26/01/2022

Elliot Ball

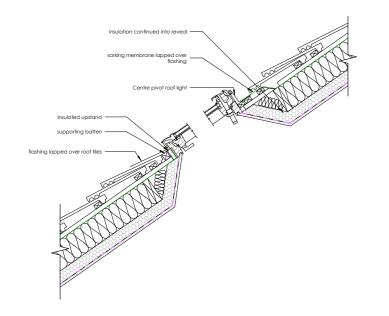
I NUMBER

1234-1234-1234

DRAWING NUMBER

04

7/01/2022 09:41:24

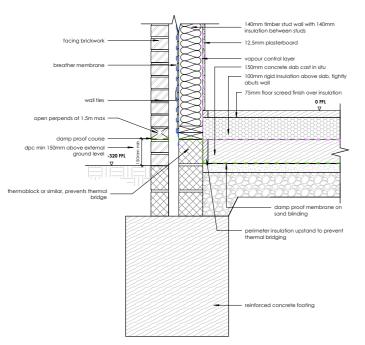


M-R9

ROOF LIGHT DETAIL -Insulation between and under rafters

Rooflight Detail 1:10





TIMBER FRAME WALL, GROUND BEARING CONCRETE SLAB, INSULATION ABOVE SLAB

All timber frame construction should be designed by an engineer - all details subject to specific design.

Perimeter stip of insulation abuts concrete slab and blockwork wall.

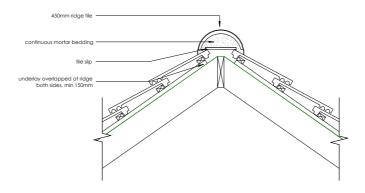
Roor screed over insulation, minimum &5mm thick, or proprietary screed min 35mm thick. Perimeter insulation to screed.

Alternative floor finish over insulation of chipboard/OSB/ply, must include a vapour control layer between the board and the insulation.

Damp proof membrane can also be positioned over slab.

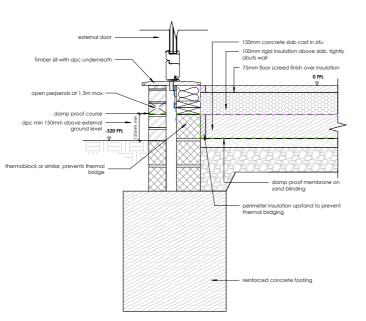
Foundation/Slab Detail

4 FOUTH



M-R11 RIDGE DETAIL - bedded ridge, unvented

Ridge Detail

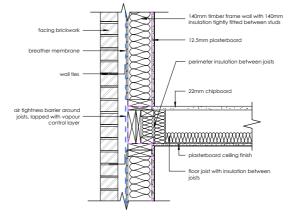


TIMBER FRAME WALL, GROUND BEARING CONCRETE SLAB, INSULATION ABOVE SLAB

All timber frame construction should be assigned by a subject to specific design.
Perimeter stip of insulation abults concrete stab and blockwork wall.
Floor screed over insulation, minimum Sharm thick, or proprietary screed min 35mm thick, therimeter insulation to screed.
Allemative floor flight over insulation of oripboard/OSB/ply, must include a vapour control layer between the board and the insulation.
Damp proof membrane can also be positioned over slab.

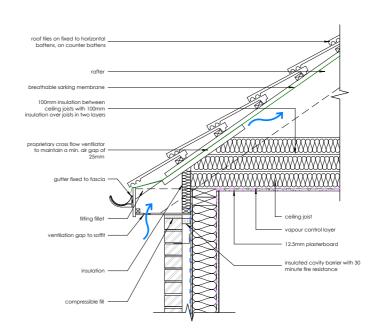
Door Cill Detail

5 1:10



TIMBER FRAME WALL TIMBER INTERMEDIATE FLOOR joists perpendicular to the wall

Intermediate Floor



**T-R1** 

TIMBER FRAME WALL EAVES DETAIL - VENTILATED ROOF SPACE (cold roof) Insulation between and over ceiling joists





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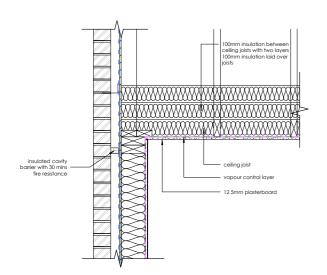
**Build Aviator** First Floor, Ross House Bury St Edmunds IP23 7AR

Contruction Details 1

**Build Aviator** 

1:10 26/01/2022 Elliot Ball

1234-1234-1234



TIMBER FRAME WALL GABLE DETAIL - VENTILATED ROOF SPACE (cold roof) **T-R2** Insulation between and over ceiling joists

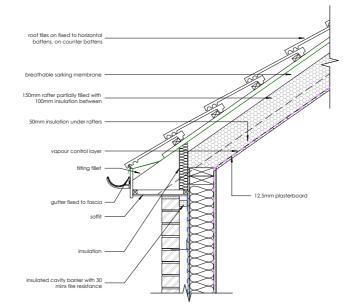
TIMBER FRAME WALL

Brick cladding

Window head (section)

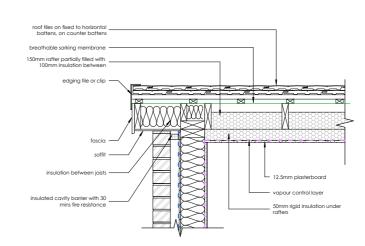
Gable Detail

1:10



TIMBER FRAME WALL EAVES DETAIL - UNVENTILATED T-R3 Insulation between and under rafters

Eaves Wall Detail



**T-R4** 

TIMBER FRAME WALL GABLE DETAIL - UNVENTILATED Insulation between and under rafters

All timber frame construction should be designed by an engineer - all details subject to specific design.

Gable Wall Detail



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Contruction Details 2

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06

TIMBER FRAME WALL Window jamb (plan) Brick cladding

Window/Door Jamb detail

(5) Window Cill Detail

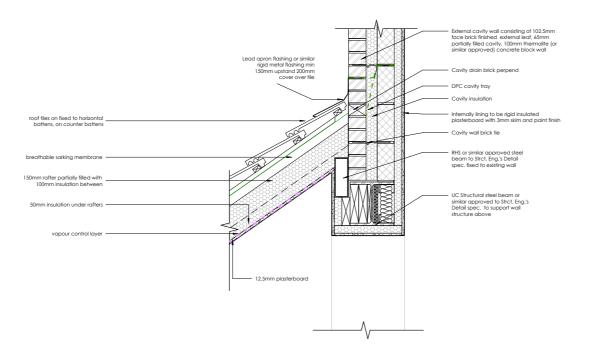
T-W8

TIMBER FRAME WALL Window cill (section)

Brick cladding

Window Head Detail

**T-W7** 



GLAZED MONOPITCHED LEAN-TO ROOF DETAIL ABUTTING TRADITIONAL CAVITY BRICK AND BLOCK WALL. CROSS SECTION A-A

Abutment Detail

1:10



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Contruction Details 3

**Build Aviator** 

1:10 DATE 26/01/2022

Elliot Ball

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Stroma U-value Calculator - Version 0.92

25/01/2022 14:26 Date Printed: Wall - External Wall Construction Type: Calculation Method: BS EN ISO 6946

	Wall Construction						
		Main Element			Bridging Element		
No	Description	Thickness	λ	R-value	λ	R-value	Fraction
-	Internal Surface Resistance	-	-	0.13	-	-	-
1	Plaster Skim	3	0.18	0.016667	-	-	-
2	Plasterboard	12.5	0.21	0.059524	-	-	-
3	Timber Frame Batt 32 (140 mm)	140	0.032	4.375	0.13	1.077	0.125
4	OSB	15	0.13	0.115385	-	-	-
5	Ventilated Cavity	50	-	0.18	-	-	-
6	Brickwork Outer Leaf - BRE (102.5 mm)	102.5	0.77	0.133117	0.94	0.109	0.1712
-	External Surface Resistance	-	-	0.04	-	-	-
		Σ=323mm		Σ=5.049692			

Resistances					
Lower Limit	Upper Limit	Average			
3.834	4.082	3.958 m²K/W			

### No Correction Values

Wall U-value	
U-value	0.253
U-value rounded	0.25 W/m²K

Stroma U-value Calculator - Version 0.92 Software:

Date Printed: 25/01/2022 14:26 Construction Type: Roof - Horizontal Ceiling BS EN ISO 6946 Calculation Method:

Roof Construction							
		Main Element			Bridging Element		
No	Description	Thickness	λ	R-value	λ	R-value	Fraction
-	Internal Surface Resistance	-	-	0.1	-	-	-
1	Plaster Skim	3	0.18	0.016667	-	-	-
2	Plasterboard	12.5	0.21	0.059524	-	-	-
3	Spacesaver (150 mm)	150	0.044	3.409091	0.13	1.154	0.125
4	Spacesaver (150 mm)	150	0.044	3.409091	-	-	-
-	External Surface Resistance	-	-	0.04	-	-	-
		Σ=315.5mm		Σ=7.034372			

	Resistances	
Lower Limit	Upper Limit	Average
6.365	6.643	6.504 m²K/W

Roof U-value				
U-value	0.154			
U-value rounded	0.15 W/m²K			

Stroma U-value Calculator - Version 0.92 Software: Date Printed: 25/01/2022 14:26

Construction Type: Roof - Sloping Ceiling Calculation Method: BS EN ISO 6946

			Main Element		Bridging Element			
No	Description	Thickness	λ	R-value	λ	R-value	Fraction	
-	Internal Surface Resistance	-	-	0.1	-	-	-	
1	Plaster Skim	3	0.18	0.016667	-	-	-	
2	Plasterboard	12.5	0.21	0.059524	-	-	-	
3	Eurothane GP (50 mm)	50	0.022	2.272727	-	-	-	
4	Eurothane GP (100 mm)	100	0.022	4.545455	0.13	0.769	0.125	
5	Unventilated Cavity	50	-	0.34	-	-	-	
-	External Surface Resistance	-	-	0.04	-	-	-	
		∇-21E E		5-7 274272				

	Resistances	
Lower Limit	Upper Limit	Average
5.646	6.519	6.082 m <sup>2</sup> K/W

### No Correction Values

	Roof U-value	
U-value		0.164
U-value rounded		0.16 W/m²K

DATA INPUT INTO CALCULATIONS	
EXTENSION GROUND FLOOR AREA	44.00 M <sup>2</sup>
EXTENSION NET WALL AREA	89.14 M <sup>2</sup>
NET ROOF AREA (A) (Insulation at rafter level or flat)	61.23 M <sup>2</sup>
NET ROOF AREA (B) (Insulation at ceiling level)	0.00 M <sup>2</sup>
WINDOWS	10.76 M²
EXTERNAL DOORS	8.10 M <sup>2</sup>
EXTENSION ROOFLIGHT AREA	2.77 M <sup>2</sup>
WINDOW/DOORS COVERED BY EXT	5.67 M <sup>2</sup>
TOTAL 5: 000 AD5A	

03.14 [e]	WALL O-VALUE	0.23
61.23 M <sup>2</sup>	ROOF (A) U-VALUE	0.16
0.00 M <sup>2</sup>	ROOFLIGHT U-VALUE	1.40
10.76 M <sup>2</sup>	ROOF (B) U-VALUE	0.16
8.10 M <sup>2</sup>	ROOFLIGHT U-VALUE	1.40
2.77 M <sup>2</sup>	WINDOW U-VALUE	1.40
5.67 M <sup>2</sup>	DOOR U-VALUE	1.80
66.00 M <sup>2</sup>		
	Actual	Permitted

	Area of	doors wi	ndow	rs a	nd ro	oflig	ghts (in m²)	Result	21.63 COMP	22.17 LIES
2. AREA -WEIGHTED	U-VALUE CALC	JLATION	L.					resone	0.01.11	2.20
NOTIONAL BUILD	DING									
FLOOR		44.00	m2	×	0.22	=	9.68 W			
WALLS		85.83	m2	х	0.28	=	24.03 W			
ROOF		64.00	m2	х	0.18	=	11.52 W			
WINDOWS/DOO	ORS	22.17	m2	х	1.80	=	39.91 W			
	TOTAL	216.00	m2				85.14 W		Allowable	0.3942
ACTUAL BUILDI	NG									
FLOOR		44.00	m2	х	0.17	=	7.48 W			
WALLS		89.14	m2	х	0.25	=	22.29 W			
ROOF (A)		61.23	m2	x	0.16	=	9.80 W			
ROOFLIGHTS		2.77	m2	х	1.40	=	3.88 W			
ROOF (B)		0.00	m2	×	0.16	=	0.00 W			
ROOFLIGHTS		0.00	m2	х	1.40	=	0.00 W			
WINDOWS		10.76	m2	х	1.40	=	15.06 W			
DOORS		8.10	m2	×	1.80	=	14.58 W			
	TOTAL	216.00	m2				73.08 W		Actual	0.3384
								Result	COMP	LIES



Stroma U-value Calculator - Version 0.92

Software: Date Printed: 25/01/2022 14:26 Construction Type: Floor - Ground Floor

BS EN ISO 6946 / BS EN ISO 13370 Calculation Method:

			Main Element Bridging			ridging Eleme	nt
No	Description	Thickness	λ	R-value	λ	R-value	Fraction
-	Internal Surface Resistance	-	-	0.17	-	-	-
1	Screed	75	0.41	0.182927	-	-	-
2	Eurothane GP (100 mm)	100	0.022	4.545455	-	-	-
3	Reinforced Concrete Slab	150	2.5	0.06	-	-	-
		Σ=325mm		Σ=4 958381			

	Nesisianices	
Lower Limit	Upper Limit	Average
4.958	4.958	4.958 m²K/W
	Soil Properties	
Perimeter		6m
Area		10m²
Wall Thickness		300mm
Ground Type - Default λ=		2W/mK
	Floor U-value Corrections	
No Correction Values		
	Floor U-value	
U-value		0.169
		0.17 W/m²K

Page 1 of 1





1st Floor Ross House Kempson Way Bury St Edmonds IP32 7AR

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26/01/2022

Elliot Ball

1234-1234-1234

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Page 1 of 1

		Win	dow Schedule				
Count	Width	Height	Family and Type				
BA_Win_up\	/c_C7: 600x1	050					
1	600	1050	BA_Win_upvc_C7: 600x1050				
1	600	1050	BA_Win_upvc_C7: 600x1050				
BA_Win_up\	/c_C10: 1500	x1050					
1	1500	1050	BA_Win_upvc_C10: 1500x1050				
1	1500	1050	BA_Win_upvc_C10: 1500x1050				
BA_Win_up\	/c_C12: 1800	x1050					
1	1800	1050	BA_Win_upvc_C12: 1800x1050				
BA_Win_up\	/c_C16: 1800	x1050					
1	1800	1050	BA_Win_upvc_C16: 1800x1050				
1	1800	1050	BA_Win_upvc_C16: 1800x1050				
Roof-Windov	ws_VELUX_G	GGL: Default					
1	940	980	Roof-Windows_VELUX_GGL: Default				
1	940	980	Roof-Windows_VELUX_GGL: Default				
1	940	980	Roof-Windows_VELUX_GGL: Default				

Height	Width	Family and Type
ricigiit	Widai	r army and Type
AD Boois D	oor: 90 x 210	n m
2100	900	AD Basic Door: 90 x 210cm
		Out: 1980x2100mm
2100	1810	BA_Door_upvc_F1-OpenOut: 1980x2100mm
Door-Openir	ng: 910 x 210	0 Opening
0	0	Door-Opening: 910 x 2100 Opening
Door-Openir	ng: 1800 x 21	00 opening
0	0	Door-Opening: 1800 x 2100 opening
Doors_ExtS	gl_w-Side Pa	nel: EB 1150x2110mm
2110	1500	Doors_ExtSgl_w-Side Panel: EB 1150x2110mm
Doors_IntDb	l_1: EB WIW	Doors 1000mm x 2100
2100	1000	Doors_IntDbl_1: EB WIW Doors 1000mm x 2100
Doors_IntSg	l_1: 910x211	0mm
2110	910	Doors_IntSgl_1: 910x2110mm
Doors_IntSg	l_1: 1010x21	10mm
2110	1010	Doors IntSql 1: 1010x2110mm

Number   Name   Level   Department   Area   e of area   Wall Finish   Floor Finish   Finish								Finish	
Bathroom	Number	Name	Level	Department	Area		Wall Finish	Floor Finish	Ceiling Finish
12	01 First Floor								
12	1.1	Rathroom	01 First Floor		2 20 m²	10 4007			
13									
16.98 m²   100.00%   100									
1			1011113111001						
3	1	Kitchen	00 Ground Floor		26.25 m²	32.45%			
Comparison									
3	1		00 Ground Floor		26.25 m <sup>2</sup>	32.45%			
Shower room	6								
18.16 m²   22.45%   8   18.16 m²   22.45%   8   18.16 m²   20.245%   8   18.16 m²   20.245%   8   18.16 m²   20.26%   9   18.18 m²   20.28%   9   18.18 m²   20.28%   9   18.18 m²   20.28%   9   18.18 m²   20.0%   9   10.00%	3	Utility							
8         Storage room         00 Ground Floor         18.83 m²         23.28%           2         Lorder         00 Ground Floor         4.88 m²         6.03%           7         Porch         00 Ground Floor         2.15 m²         2.66%           90 Ground Floor: 8         80.90 m²         100.00%           Not Placed         80.90 m²         100.00%           1         Living Room         Not Placed         Not Placed           3         Living Room         Not Placed         Not Placed         0.00%           5         Utility Room         Not Placed         Not Placed         0.00%           6         Shower Room         Not Placed         Not Placed         0.00%           7         Storage Room         Not Placed         Not Placed         0.00%           8         Dining room         Not Placed         Not Placed         0.00%           9         WC         Not Placed         Not Placed         0.00%           10         Porch         Not Placed         Not Placed         0.00%	4	Shower room	00 Ground Floor		2.59 m <sup>2</sup>	3.20%			
2         Larder         00 Ground Floor         4.88 m²         6.03%           7         Porch         00 Ground Floor         2.15 m²         2.65%           00 Ground Floor: 8         80.90 m²         100.00%           Not Placed         Not Placed         0.00%           3         Living Room         Not Placed         Not Placed           5         Utility Room         Not Placed         Not Placed           6         Shower Room         Not Placed         Not Placed           7         Storage Room         Not Placed         Not Placed           8         Dining room         Not Placed         Not Placed           9         WC         Not Placed         Not Placed           10         Porch         Not Placed         Not Placed           Not Placed         0.00%	5	Living room							
7         Porch         00 Ground Floor         2.15 m²         2.66%           00 Ground Floor: 8         80.90 m²         100.00%           Not Placed         80.90 m²         100.00%           2         Room         Not Placed         0.00%           3         Living Room         Not Placed         0.00%           5         Utility Room         Not Placed         Not Placed           6         Shower Room         Not Placed         0.00%           7         Storage Room         Not Placed         Not Placed           8         Dining room         Not Placed         Not Placed           9         WC         Not Placed         Not Placed           10         Porch         Not Placed         Not Placed           Not Placed         Not Placed         0.00%	8	Storage room	00 Ground Floor		18.83 m²	23.28%			
Not Placed   Not Placed   Not Placed   0.00%	2	Larder			4.88 m²	6.03%			
Not Placed   Not Placed   0.00%	7	Porch	00 Ground Floor		2.15 m <sup>2</sup>	2.66%			
2         Room         Not Placed         0.00%           3         Living Room         Not Placed         0.00%           5         Utilify Room         Not Placed         0.00%           6         Shower Room         Not Placed         0.00%           7         Storage Room         Not Placed         Not Placed           8         Dining room         Not Placed         Not Placed           9         WC         Not Placed         Not Placed           10         Porch         Not Placed         Not Placed           Not Placed         Not Placed         0.00%	00 Ground Fl	loor: 8			80.90 m²	100.00%			
1	Not Placed								
1		-							
55         Utilify Room         Not Placed         0.00%           6         Shower Room         Not Placed         0.00%           7         Storage Room         Not Placed         Not Placed           8         Dining room         Not Placed         0.00%           9         WC         Not Placed         Not Placed           10         Porch         Not Placed         Not Placed	2								
66         Shower Room         Not Placed         Not Placed         0.00%           7         Storage Room         Not Placed         Not Placed         0.00%           8         Dining room         Not Placed         Not Placed         0.00%           9         WC         Not Placed         Not Placed         0.00%           10         Porch         Not Placed         Not Placed         0.00%	3								
7         Storage Room         Not Placed         Not Placed         0.00%           8         Dining room         Not Placed         Not Placed         0.00%           9         WC         Not Placed         Not Placed         0.00%           10         Porch         Not Placed         Not Placed         0.00%	5	- /							
8         Dining room         Not Placed         0.00%           9         WC         Not Placed         Not Placed         0.00%           10         Porch         Not Placed         Not Placed         0.00%	6								
9 WC Not Placed Not Placed 0.00% 10 Porch Not Placed Not Placed 0.00%	7	Storage Room	Not Placed		Not Placed	010070			
10 Porch Not Placed Not Placed 0.00%	8					0.00%			
	9		Not Placed		Not Placed	0.00%			
Not Placed: 8 0.00 m <sup>2</sup> 0.00%	10	Porch	Not Placed		Not Placed	0.00%			
	Not Placad.	8			0.00 m <sup>2</sup>	0.00%			



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Schedules

**Build Aviator** 

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