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Project: Proposed Modifications to Residential Development at Jamestown, Ratoath, Co Meath

Job No.: 2024_084

Drawing Series: LRD PLANNING APPLICATION

As outlined in the "Development Management Criteria" of the "Urban Development and Building Heights Guidelines for Planning Authorities, 2018," it is essential that the design elements—such as form, massing, and height—of proposed developments are carefully considered. This approach optimizes access to natural daylight, ventilation, and views while minimizing overshadowing and loss of light, thereby ensuring that buildings contribute positively to their surroundings and enhance the well-being of occupants.

In line with these guidelines, the CDP Architecture team conducted a comprehensive daylight study for the two proposed units.

The study results demonstrate that the areas within the proposed residential scheme will receive ample sunlight throughout the year, ensuring that the units will have more than adequate natural light. This will provide future residents with well-lit living spaces that enhance comfort and reduce dependence on artificial lighting.

For a detailed breakdown of the daylight levels for each unit, please refer to the table below, which provides a comprehensive

Spatial Daylight Autonomy (Sda)

										Criteria				
Floor Ref	Room Ref	Room Attribute	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
BLOCK NO.1														
Ground	R1		Residential	LKD	26.62	19.74	467	18.13	92%	200	50%	50%	4380	YES
	R2		Residential	LKD	29.93	22.51	498	22.51	100%	200	50%	50%	4380	YES
	R4		Residential	Bedroom	13.06	9.01	273	9.01	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	8.11	5.04	491	5.04	100%	100	50%	50%	4380	YES
	R6		Residential	Bedroom	7.21	4.32	409	4.32	100%	100	50%	50%	4380	YES
	R7		Residential	Bedroom	13.44	9.47	323	9.47	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.61	19.24	287	17.25	90%	200	50%	50%	4380	YES
	R9		Residential	Bedroom	15.33	10.89	199	10.89	100%	100	50%	50%	4380	YES
	R10		Residential	Bedroom	9.72	6.29	320	6.29	100%	100	50%	50%	4380	YES
	R11		Residential	LKD	28.39	22.15	250	14.38	65%	200	50%	50%	4380	YES
	R12		Residential	Bedroom	14.67	10.38	277	10.38	100%	100	50%	50%	4380	YES
	R13		Residential	Bedroom	12.90	8.91	572	8.91	100%	100	50%	50%	4380	YES
	R14		Residential	Bedroom	12.99	9.01	375	9.01	100%	100	50%	50%	4380	YES
	R15		Residential	Bedroom	12.31	8.45	388	8.45	100%	100	50%	50%	4380	YES
	R16		Residential	LKD	29.99	23.74	469	23.74	100%	200	50%	50%	4380	YES
	R17		Residential	LKD	29.12	22.32	931	22.32		200	50%	50%	4380	YES
	R18		Residential	Bedroom	9.52	6.07	520	6.07	100%	100	50%	50%	4380	YES
First	R1		Residential	LKD	26.62	19.74	530	18.58	94%	200	50%	50%	4380	YES
	R2		Residential	LKD	29.92	22.50	544	22.50	100%	200	50%	50%	4380	YES
	R4		Residential	Bedroom	13.06	9.01	316	9.01	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	8.11	5.04	509	5.04	100%	100	50%	50%	4380	YES
	R6		Residential	Bedroom	7.21	4.32	487	4.32	100%	100	50%	50%	4380	YES
	R7		Residential	Bedroom	13.44	9.47	339	9.47	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.61	19.24	316	17.79	92%	200	50%	50%	4380	YES
	R9		Residential	Bedroom	15.33	10.89	226	10.89	100%	100	50%	50%	4380	YES
	R10		Residential	LKD	28.39	22.15	275	15.81	71%	200	50%	50%	4380	YES
	R11		Residential	Bedroom	9.72	6.29	352	6.29	100%	100	50%	50%	4380	YES
	R12		Residential	Bedroom	14.67	10.38	305	10.38	100%	100	50%	50%	4380	YES
	R13		Residential	Bedroom	12.90	8.91	609	8.91	100%	100	50%	50%	4380	YES
	R14		Residential	Bedroom	12.99	9.01	380	9.01	100%	100	50%	50%	4380	YES
	R15		Residential	Bedroom	12.31	8.45	412	8.45	100%	100	50%	50%	4380	YES
	R16		Residential	LKD	29.99	23.74	496	23.74	100%	200	50%	50%	4380	YES
	R17		Residential	LKD	29.12	22.32	995	22.32	100%	200	50%	50%	4380	YES
	R18		Residential	Bedroom	9.52	6.07	533	6.07	100%	100	50%	50%	4380	YES
Second	R1		Residential	LKD	26.62	19.74	598	19.02	96%	200	50%	50%	4380	YES
	R2		Residential	LKD	29.92	22.50	581	22.50	100%	200	50%	50%	4380	YES
	R4		Residential	Bedroom	13.06	9.01	360	9.01	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	8.11	5.04	534	5.04	100%	100	50%	50%	4380	YES
	R6		Residential	Bedroom	7.21	4.32	556	4.32	100%	100	50%	50%	4380	YES
	R7		Residential	Bedroom	13.44	9.47	356	9.47	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.61	19.24	335	18.34	95%	200	50%	50%	4380	YES
	R9		Residential	Bedroom	15.33	10.89	259	10.89	100%	100	50%	50%	4380	YES
	R10		Residential	LKD	28.39	22.15	316	18.13	82%	200	50%	50%	4380	YES
	R11		Residential	Bedroom	9.72	6.29	366	6.29	100%	100	50%	50%	4380	YES
	R12		Residential	Bedroom	14.67	10.38	359	10.38	100%	100	50%	50%	4380	YES
	R13		Residential	Bedroom	12.90	8.91	675	8.91	100%	100	50%	50%	4380	YES
	R14		Residential	Bedroom	12.99	9.01	387	9.01	100%	100	50%	50%	4380	YES
	R15		Residential	Bedroom	12.31	8.45	415	8.45	100%	100	50%	50%	4380	YES
	R16		Residential	LKD	29.99	23.74	515	23.74	100%	200	50%	50%	4380	YES
	R17		Residential	LKD	29.12	22.32	1053	22.32	100%	200	50%	50%	4380	YES
	R18		Residential	Bedroom	9.52	6.07	540	6.07	100%	100	50%	50%	4380	YES
Third	R1		Residential	LKD	26.62	19.74	684	19.74	100%	200	50%	50%	4380	YES
	R2		Residential	LKD	29.92	22.50	608	22.50	100%	200	50%	50%	4380	YES
	R4		Residential	Bedroom	13.06	9.01	414	9.01	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	8.11	5.04	555	5.04	100%	100	50%	50%	4380	YES
	R6		Residential	Bedroom	7.21	4.32	608	4.32	100%	100	50%	50%	4380	YES
	R7		Residential	Bedroom	13.44	9.47	381	9.47	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.61	19.24	350	18.79	98%	200	50%	50%	4380	YES
	R9		Residential	Bedroom	15.33	10.89	307	10.89	100%	100	50%	50%	4380	YES
	R10		Residential	LKD	28.39	22.15	380	21.25	96%	200	50%	50%	4380	YES
	R11		Residential	Bedroom	9.72	6.29	390	6.29	100%	100	50%	50%	4380	YES
	R12		Residential	Bedroom	14.67	10.38	403	10.38	100%	100	50%	50%	4380	YES
	R13		Residential	Bedroom	12.90	8.91	731	8.91	100%	100	50%	50%	4380	YES
	R14		Residential	Bedroom	12.99	9.01	394	9.01	100%	100	50%	50%	4380	YES
	R15		Residential	Bedroom	12.31	8.45	423	8.45	100%	100	50%	50%	4380	YES
	R16		Residential	LKD	29.99	23.74	536	23.74	100%	200	50%	50%	4380	YES
	R17		Residential	LKD	29.12	22.32	1115	22.32	100%	200	50%	50%	4380	YES
	R18		Residential	Bedroom	9.52	6.07	548	6.07	100%	100	50%	50%	4380	YES
Fourth	R1		Residential	LKD	26.62	19.74	778	19.74	100%	200	50%	50%	4380	YES
	R2		Residential	LKD	29.92	22.50	642	22.50	100%	200	50%	50%	4380	YES
	R4		Residential	Bedroom	13.06	9.01	471	9.01	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	8.11	5.04	574	5.04	100%	100	50%	50%	4380	YES
	R6		Residential	Bedroom	7.21	4.32	701	4.32	100%	100	50%	50%	4380	YES
	R7		Residential	Bedroom	13.44	9.47	385	9.47	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.61	19.24	387	19.24	100%	200	50%	50%	4380	YES
	R9		Residential	Bedroom	15.33	10.89	372	10.89	100%	100	50%	50%	4380	YES
	R10		Residential	LKD	28.39	22.15	440	22.15	100%	200	50%	50%	4380	YES
	R11		Residential	Bedroom	9.72	6.29	432	6.29	100%	100	50%	50%	4380	YES
	R12		Residential	Bedroom	14.67	10.38	445	10.38	100%	100	50%	50%	4380	YES
	R13		Residential	Bedroom	12.90	8.91	775	8.91	100%	100	50%	50%	4380	YES
	R14		Residential	Bedroom	12.99	9.01	403	9.01	100%	100	50%	50%	4380	YES
	R15		Residential	Bedroom	12.31	8.45	435	8.45	100%	100	50%	50%	4380	YES
	R16		Residential	LKD	29.99	23.74	547	23.74	100%	200	50%	50%	4380	YES
	R17		Residential	LKD	29.12	22.32	1178	22.32	100%	200	50%	50%	4380	YES
	R18		Residential	Bedroom	9.52	6.07	557	6.07	100%	100	50%	50%	4380	YES
Fifth	R1		Residential	Living Room	28.83	22.40	567	22.40	100%	150	50%	50%	4380	YES
	R2		Residential	Kitchen	8.85	5.61	699	5.61	100%	200	50%	50%	4380	YES
	R3		Residential	Bedroom	11.42	7.75	317	7.75	100%	100	50%	50%	4380	YES
	R4		Residential	Bedroom	8.76	5.46	409	5.46	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	13.59	9.50	791	9.50	100%	100	50%	50%	4380	YES
	R6		Residential	Living Room	12.86	8.80	613	8.80	100%	150	50%	50%	4380	YES
	R7		Residential	Bedroom	16.21	11.70	467	11.70	100%	100	50%	50%	4380	YES
	R8		Residential	Bedroom	21.50	16.08	1389	16.08	100%	100	50%	50%	4380	YES
	R9		Residential	Living Room	15.92	11.46	382	11.46	100%	150	50%	50%	4380	YES
	R10		Residential	Bedroom	11.66	7.69	616	7.69	100%	100	50%	50%	4380	YES
	R11		Residential	Living Room	23.18	17.64	794	17.64	100%	150	50%	50%	4380	YES
BLOCK NO.2														
Ground	R1		Residential	LKD	26.62	19.75	409	17.86	90%	200	50%	50%	4380	YES
	R2		Residential	LKD	25.06	19.27	650	19.27	100%	200	50%	50%	4380	YES
	R3		Residential	Kitchen	4.87	2.52	615	2.52	100%	200	50%	50%	4380	YES
	R4		Residential	Bedroom	13.06	9.01	207	9.01	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	8.11	5.04	721	5.04	100%	100	50%	50%	4380	YES
	R6		Residential	Bedroom	7.21	4.32	313	4.32	100%	100	50%	50%	4380	YES
	R7		Residential	Bedroom	13.44	9.46	478	9.46	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.61	19.25	413	19.25	100%	200	50%	50%	4380	YES
	R9		Residential	Bedroom	15.33	10.89	141	10.03	92%	100	50%	50%	4380	YES
	R10		Residential	Bedroom	9.72	6.29	429	6.29	100%	100	50%	50%	4380	YES
	R11		Residential	LKD	28.39	22.15	159	8.22	37%	200	50%	50%	4380	NO

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In line with these guidelines, the CDP Architecture team conducted a comprehensive daylight study for the two proposed units.

The study results demonstrate that the areas within the proposed residential scheme will receive ample sunlight throughout the year, ensuring that the units will have more than adequate natural light. This will provide future residents with well-lit living spaces that enhance comfort and reduce dependence on artificial lighting.

For a detailed breakdown of the daylight levels for each unit, please refer to the table below, which provides a comprehensive

Spatial Daylight Autonomy (Sda)

										Criteria				
Floor Ref	Room Ref	Room Attribute	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours	Meets Criteria
	R12		Residential	Bedroom	14.67	10.39	196	10.39	100%	100	50%	50%	4380	YES
	R13		Residential	Bedroom	12.90	8.92	732	8.92	100%	100	50%	50%	4380	YES
	R14		Residential	Bedroom	12.99	9.01	334	9.01	100%	100	50%	50%	4380	YES
	R15		Residential	Bedroom	12.31	8.45	420	8.45	100%	100	50%	50%	4380	YES
	R16		Residential	LKD	29.99	23.75	556	23.75	100%	200	50%	50%	4380	YES
	R17		Residential	LKD	29.12	22.32	700	22.32	100%	200	50%	50%	4380	YES
	R18		Residential	Bedroom	9.52	6.07	518	6.07	100%	100	50%	50%	4380	YES
First	R64		Residential	LKD	29.99	23.75	683	23.75	100%	200	50%	50%	4380	YES
	R52		Residential	Bedroom	12.90	8.92	951	8.92	100%	100	50%	50%	4380	YES
	R60		Residential	Bedroom	12.31	8.45	474	8.45	100%	100	50%	50%	4380	YES
	R56		Residential	Bedroom	12.99	9.01	367	9.01	100%	100	50%	50%	4380	YES
	R72		Residential	Bedroom	9.52	6.07	560	6.07	100%	100	50%	50%	4380	YES
	R68		Residential	LKD	29.12	22.32	838	22.32	100%	200	50%	50%	4380	YES
	R48		Residential	Bedroom	14.67	10.39	293	10.39	100%	100	50%	50%	4380	YES
	R40		Residential	LKD	28.39	22.15	291	16.70	75%	200	50%	50%	4380	YES
	R44		Residential	Bedroom	9.72	6.29	595	6.29	100%	100	50%	50%	4380	YES
	R32		Residential	LKD	25.61	19.25	555	19.25	100%	200	50%	50%	4380	YES
	R36		Residential	Bedroom	15.33	10.89	257	10.89	100%	100	50%	50%	4380	YES
	R28		Residential	Bedroom	13.44	9.46	597	9.46	100%	100	50%	50%	4380	YES
	R20		Residential	Bedroom	8.11	5.04	872	5.04	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.07	19.27	844	19.27	100%	200	50%	50%	4380	YES
	R24		Residential	Bedroom	7.21	4.32	529	4.32	100%	100	50%	50%	4380	YES
	R16		Residential	Bedroom	13.06	9.01	333	9.01	100%	100	50%	50%	4380	YES
	R4		Residential	LKD	26.62	19.75	628	19.75	100%	200	50%	50%	4380	YES
Second	R64		Residential	LKD	29.99	23.75	683	23.75	100%	200	50%	50%	4380	YES
	R52		Residential	Bedroom	12.90	8.92	951	8.92	100%	100	50%	50%	4380	YES
	R60		Residential	Bedroom	12.31	8.45	474	8.45	100%	100	50%	50%	4380	YES
	R56		Residential	Bedroom	12.99	9.01	367	9.01	100%	100	50%	50%	4380	YES
	R72		Residential	Bedroom	9.52	6.07	560	6.07	100%	100	50%	50%	4380	YES
	R68		Residential	LKD	29.12	22.32	838	22.32	100%	200	50%	50%	4380	YES
	R48		Residential	Bedroom	14.67	10.39	293	10.39	100%	100	50%	50%	4380	YES
	R40		Residential	LKD	28.39	22.15	291	16.70	75%	200	50%	50%	4380	YES
	R44		Residential	Bedroom	9.72	6.29	595	6.29	100%	100	50%	50%	4380	YES
	R32		Residential	LKD	25.61	19.25	555	19.25	100%	200	50%	50%	4380	YES
	R36		Residential	Bedroom	15.33	10.89	257	10.89	100%	100	50%	50%	4380	YES
	R28		Residential	Bedroom	13.44	9.46	597	9.46	100%	100	50%	50%	4380	YES
	R20		Residential	Bedroom	8.11	5.04	872	5.04	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.07	19.27	844	19.27	100%	200	50%	50%	4380	YES
	R24		Residential	Bedroom	7.21	4.32	529	4.32	100%	100	50%	50%	4380	YES
	R16		Residential	Bedroom	13.06	9.01	333	9.01	100%	100	50%	50%	4380	YES
	R4		Residential	LKD	26.62	19.75	628	19.75	100%	200	50%	50%	4380	YES
Third	R64		Residential	LKD	29.99	23.75	683	23.75	100%	200	50%	50%	4380	YES
	R52		Residential	Bedroom	12.90	8.92	951	8.92	100%	100	50%	50%	4380	YES
	R60		Residential	Bedroom	12.31	8.45	474	8.45	100%	100	50%	50%	4380	YES
	R56		Residential	Bedroom	12.99	9.01	367	9.01	100%	100	50%	50%	4380	YES
	R72		Residential	Bedroom	9.52	6.07	560	6.07	100%	100	50%	50%	4380	YES
	R68		Residential	LKD	29.12	22.32	838	22.32	100%	200	50%	50%	4380	YES
	R48		Residential	Bedroom	14.67	10.39	293	10.39	100%	100	50%	50%	4380	YES
	R40		Residential	LKD	28.39	22.15	291	16.70	75%	200	50%	50%	4380	YES
	R44		Residential	Bedroom	9.72	6.29	595	6.29	100%	100	50%	50%	4380	YES
	R32		Residential	LKD	25.61	19.25	555	19.25	100%	200	50%	50%	4380	YES
	R36		Residential	Bedroom	15.33	10.89	257	10.89	100%	100	50%	50%	4380	YES
	R28		Residential	Bedroom	13.44	9.46	597	9.46	100%	100	50%	50%	4380	YES
	R20		Residential	Bedroom	8.11	5.04	872	5.04	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.07	19.27	844	19.27	100%	200	50%	50%	4380	YES
	R24		Residential	Bedroom	7.21	4.32	529	4.32	100%	100	50%	50%	4380	YES
	R16		Residential	Bedroom	13.06	9.01	333	9.01	100%	100	50%	50%	4380	YES
	R4		Residential	LKD	26.62	19.75	628	19.75	100%	200	50%	50%	4380	YES
Fourth	R64		Residential	LKD	29.99	23.75	683	23.75	100%	200	50%	50%	4380	YES
	R52		Residential	Bedroom	12.90	8.92	951	8.92	100%	100	50%	50%	4380	YES
	R60		Residential	Bedroom	12.31	8.45	474	8.45	100%	100	50%	50%	4380	YES
	R56		Residential	Bedroom	12.99	9.01	367	9.01	100%	100	50%	50%	4380	YES
	R72		Residential	Bedroom	9.52	6.07	560	6.07	100%	100	50%	50%	4380	YES
	R68		Residential	LKD	29.12	22.32	838	22.32	100%	200	50%	50%	4380	YES
	R48		Residential	Bedroom	14.67	10.39	293	10.39	100%	100	50%	50%	4380	YES
	R40		Residential	LKD	28.39	22.15	291	16.70	75%	200	50%	50%	4380	YES
	R44		Residential	Bedroom	9.72	6.29	595	6.29	100%	100	50%	50%	4380	YES
	R32		Residential	LKD	25.61	19.25	555	19.25	100%	200	50%	50%	4380	YES
	R36		Residential	Bedroom	15.33	10.89	257	10.89	100%	100	50%	50%	4380	YES
	R28		Residential	Bedroom	13.44	9.46	597	9.46	100%	100	50%	50%	4380	YES
	R20		Residential	Bedroom	8.11	5.04	872	5.04	100%	100	50%	50%	4380	YES
	R8		Residential	LKD	25.07	19.27	844	19.27	100%	200	50%	50%	4380	YES
	R24		Residential	Bedroom	7.21	4.32	529	4.32	100%	100	50%	50%	4380	YES
	R16		Residential	Bedroom	13.06	9.01	333	9.01	100%	100	50%	50%	4380	YES
	R4		Residential	LKD	26.62	19.75	628	19.75	100%	200	50%	50%	4380	YES
Fifth	R1		Residential	LKD	28.83	22.40	446	22.40	100%	200	50%	50%	4380	YES
	R2		Residential	Kitchen	8.85	5.61	919	5.61	100%	200	50%	50%	4380	YES
	R3		Residential	Bedroom	11.42	7.75	360	7.75	100%	100	50%	50%	4380	YES
	R4		Residential	Bedroom	8.76	5.46	422	5.46	100%	100	50%	50%	4380	YES
	R5		Residential	Bedroom	13.59	9.51	914	9.51	100%	100	50%	50%	4380	YES
	R6		Residential	Living Room	12.86	8.80	379	8.80	100%	150	50%	50%	4380	YES
	R7		Residential	Bedroom	16.21	11.70	304	11.70	100%	100	50%	50%	4380	YES
	R8		Residential	Bedroom	21.50	16.08	1058	16.08	100%	100	50%	50%	4380	YES
	R9		Residential	Kitchen	15.92	11.46	416	11.46	100%	200	50%	50%	4380	YES
	R10		Residential	Bedroom	11.66	7.69	532	7.69	100%	100	50%	50%	4380	YES
	R11		Residential	Living Room	23.18	17.65	969	17.65	100%	150	50%	50%	4380	YES