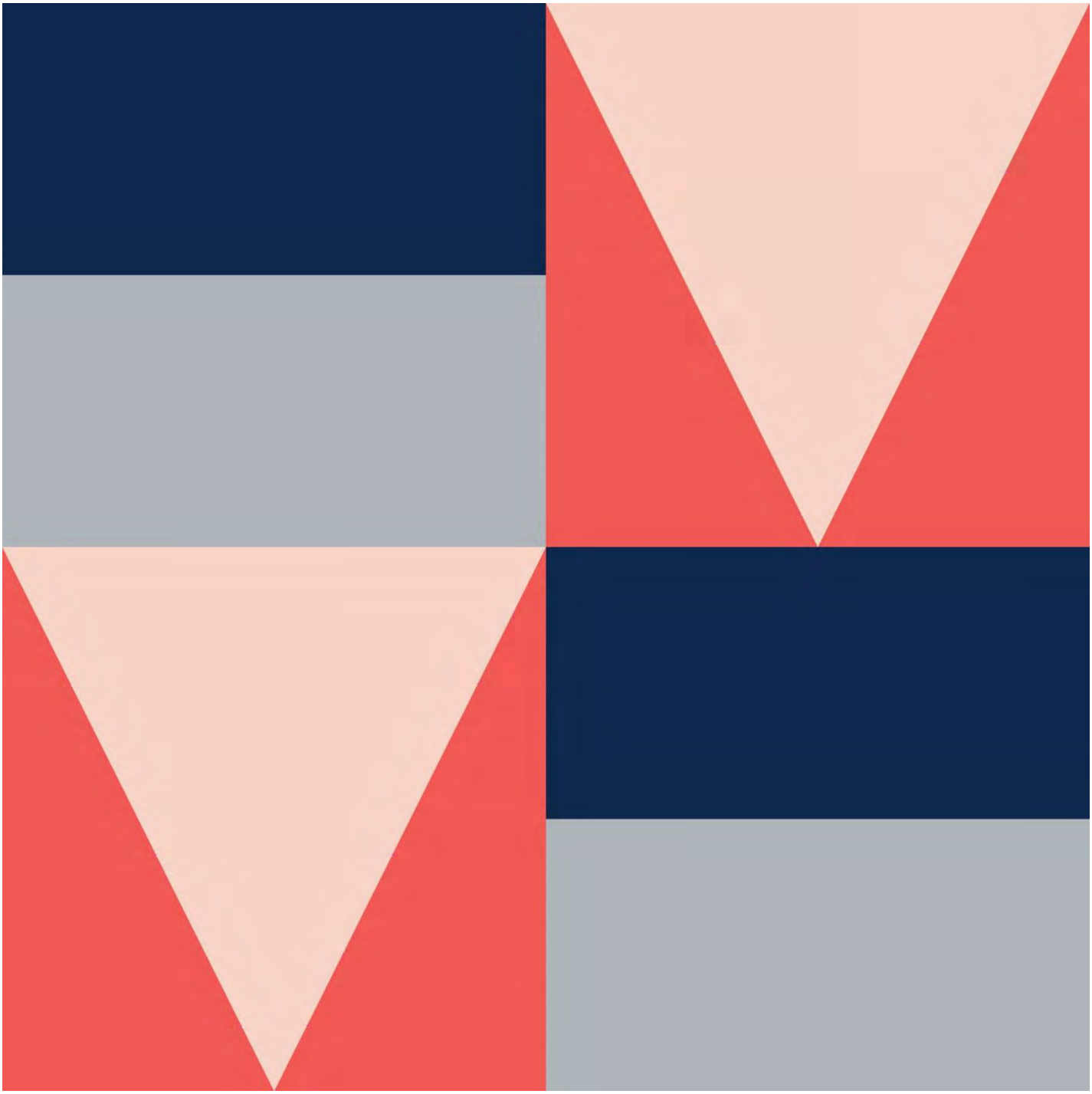
Holmes Miller

Project Note

5581 Boroughmuir HS Accommodation Review

Initial Occupancy Review Notes

February 2026



Executive Summary:

Holmes Miller were requested to review the total accommodation and occupancy capacity of Boroughmuir High School including the recent new-build extension provision.

This assessment focused on a review of the following three criteria only:

- Sanitary Provision
- Escape Stair Effective Widths
- Final Exit Door Effective Widths

As such, this review does not include any impact of other building compliance criteria such as corridor or door widths, travel distances, fire engineered solutions etc.

Our assessment concludes that the overall school accommodation capacity is governed by a combination of sanitary provision and means of escape constraints. The sanitary provision supports a maximum population of **1920 pupils and assumption of 150 staff** [see Appendix A], based on the assumption that **two out of three accessible toilets are allocated for pupil use**. Assessment of the means of escape indicates that **escape stair widths limit the upper-floors occupancy to a maximum of 1490 persons** [see Page 7], with any additional capacity required to be accommodated at **ground floor level only** and managed through the school's operational and fire evacuation strategy. The **final exit widths allow a higher overall capacity of up to 1980 persons** [see Page 6]. Taking these factors together, and allowing for assumed total of **150 staff**, a **realistic maximum pupil capacity of 1830 pupils** is expected.

Reference extracts from Buro Happold Fire Engineering Report:

4.1 Building Occupancy

There is a large difference between the calculated (area load factor) and design occupancies for the building, noted within Table 4-1. As such the calculated occupancy has been used to demonstrate conservatism within the escape route design with note given to the actual design occupancy defined by the School.

Occupancy Type	Break down	Total	Variance (%)
Calculated Occupancy: Full Usage Class/ Worst Case	 4,419 2,155		
Design Occupancy			
School Roll	1,165		
Teachers	135		
Ancillary Staff (assumed)	100	1,400	
Difference		3,019 or 755	315% or 54%

Table 4—1 Building Occupancy

As is noted there is a large difference between the calculated and design occupancies. In demonstrating both conservative and realistic occupancies the lower calculated occupancy of 2,155 persons will be used.

4.7 Escape Route Width

The exit routes horizontally take into account the occupants within that area providing a width of 5.3mm per occupant. The required horizontal escape width is calculated using the following: -

- Number of Occupants x 5.3mm = (horizontal) escape width required

As the escape stairs discharge on Level -1 and there are horizontal escape routes via these stairs the final exit width required from the stairs will be the calculated by the following: -

- Escape stair width + (horizontal) escape width required = Escape Route Width at Point of Divergence/ Exit

These are noted within Table 4-2 for the building as proposed, with the required stair width noted in Table 4-4.

	Stair 1	Stair 2	Stair 3	Stair 4
AC Width (Table 2-4)	1600	1600	1600	1600
Level -1 Horizontal Width Required	62x5.3= 331	62x5.3= 331	217x5.3= 1151	217x5.3= 1151
Final Exit Width Required	1931mm	1931mm	2751mm	2751mm
Minimum Final Exit Width Provided	1931mm	1931mm	2751mm	2751mm

Table 4—4 Stair Final Exit Width

As Table 4-4 illustrates the final exit widths provided are suitable for the occupancy for all of the stair cores.

It is further noted that the minimum corridor/ compartment door width is 1800mm which also meets the escape width requirement between compartments.

Table 4-5 indicates what levels the stairs serve, the applicable occupancy to these and the required width of each stair using the calculated occupancy.

	Occupancy	Exits (-1)	Stair 1	Stair 2	Stair 3	Stair 4
Level +3						
Comp 1	330	3	-	-	-	-
Comp 7	300	3	-	-	100	100
Comp 8	60	3 (2 used)	30	30		
Level +2						
Comp 1	300	3	100	100	-	-
Comp 7	212	3	-	-	71	71
MUGA	60	1	-	-	-	-
Level +1						
Comp 1	505	4	127	127	127	127
Level 0						
Comp 1	288	4	72	72	72	72
Sports Hall	100	1	-	-	-	-
Total	2155a		342	342	370	370
Appropriate Capacity (80%)			274	274	296	296
Stair Width Required (x5.3mm per person)			1453mm	1453mm	1569mm	1569mm
			1590mm	1590mm	1590mm	1590mm

a: this is the total building occupancy based on class/ worst case usage.

Table 4—5 Escape Stair Widths Required

As illustrated in Table 4-5 the stair widths are suitable for the design occupancies utilising them.

Smoke clearance measures will be installed in each protected escape stair enclosure for the fire service (noted in Section 5 of this report).

As all of the stairs are 1600mm these are suitable for means of escape with the building configuration as shown.

It is noted that the final exits from the building for fire evacuation are the four stair cores and the main, Level 0 entrance. This allows the security aspirations of the school to be met whilst providing sufficient means of escape from the building. It is recommended that the Level -1 central social space is equipped for egress to assist both fire service access and any egress for mobility impairment occupants.

Reference extracts from Holmes Miller Building Warrant Notes (rev B) for extension project:

2.9.8 Escape Route Widths (Extension):
Occupancy Capacity:
Level G = 60
Level 1 = N/A (WCs only no occupancy)
Level 2 = 84
Level 3 = 123
Level 4 = 135
Total = 342
Each floor (Level 4 take as a worst case scenario):
2 No. exits from levels 2 - 4. 1 No. exit from floors G - 1.
5.3 x OC (level 4)
5.3 x 135 = 716mm
Less than 225 occupants using escape route on each floor:
***Doors**: 850mm clear width.*
***Corridors**: 1100mm wide minimum (NB these will be a minimum of 1200mm wide to comply with DDA requirements).*

2.9.31 Escape Stair Widths:
Existing School:
4 No. escape stairs.
All escape stairs are accessed via a protected lobby
Occupancy Capacity (existing):
Current FTE staff: = 105
Current roll = 1255
Total = 1360
This is assumed to be split evenly on each floor (5 floors) = 272 per floor
Appropriate capacity (existing):
Total occupants from all floors using stair (Ground floor OC discounted): 272 x 4 floors = 1088.
20% reduction for occupants standing in stair = 1088 – ((1088/100)x20) = 871
Effective width of stairs (existing):
**1No. stair not discounted because each stair is accessed by a protected lobby*
*Effective width = (5.3x Appropriate Capacity) / No. stairs**
Effective width = (5.3x871) / 4
Effective width = 1155mm
Actual clear width of stairs = 1600mm
Spare capacity in existing stairs:
Maximum capacity of existing stairs:
**1No. stair not discounted because each stair is accessed by a protected lobby*
*Effective width = (5.3x Appropriate Capacity) / No. stairs**
Actual effective width = 1600mm (clear)
1600 = (5.3x Appropriate Capacity) / 4
AC = (4 x 1600) / 5.3
AC = 1200
This equates to 1200/4 = 300 occupants per stair
Current occupants escaping down each stair = 871 / 4 = 218
Spare capacity per stair: 300 – 218 = 82 occupants

New Extension:

2 No. escape stairs.

Appropriate capacity (new):

Level 1 = 29 – occupant's shared with ground floor – taken here as worst case scenario.

Level 2 = 111

Level 3 = 123

Level 4 = 135

Total = 398

Total occupants from all floors using stair (Ground floor OC discounted): = 29+111+123+135 = 398

Effective width of stairs (new):

Escape strategy from extension utilises 1 No. stair from the existing building.

The above calculation demonstrates that each existing escape stair has a spare capacity of 82 occupants.

NB 1No. stair not discounted because each stair is accessed by a protected lobby.

Total occupants of new extension = 398

20% reduction for occupants standing in stair = 398 – ((398/100)x20) = 319

82 of these occupants can use the existing escape stair.

This leaves 237 (319 – 82) occupants to escape down the new stair

Effective width = (5.3x Appropriate Capacity) / No. stairs

Effective width = (5.3x 237) / 1

Effective width of new stair = 1256mm

New escape stair will be 1500mm wide.

HM Assessment Feb 2026

Combined study:

Appropriate Capacity (combined):
1360 existing + 398 extension = 1758
20% reduction for occupants standing in stair = 1758 – ((1758/100)x20) = 1407

Effective width of stairs (combined):
*1No. stair not discounted because each stair is accessed by a protected lobby
Effective width = (5.3x Appropriate Capacity) / No. stairs*
Effective width = (5.3x1407) / 5
Effective width = 1491mm
Actual clear width of stairs = (4x1600mm+1x1500mm)

Available maximum capacity of stairs (combined using smallest stair):
Available stairs = 4x1600mm+1x1500mm
Controlling effective stair width = 1500 mm
Effective Width = (AC x 5.3) / No of Stairs
AC = (EW x No of Stairs) / 5.3
AC = (1500 x 5) / 5.3
AC = 1415
1415 / 4 floors = 353 people per floor
5 floors = 1765 total

Final Exit Widths:

Main Entrance	2400mm	
Stair 1	2200mm	
Stair 2	2700mm	
Stair 3	2200mm	
Stair 4	2700mm	
Stair 5	1000mm	
	12300mm	Total
Occupancy	**1981**	(Divided by 5.3)

Available maximum capacity of stairs (combined):
Available stairs = 4x1600mm+1x1500mm

Controlling effective stair width = 1500 mm
Effective Width = (AC x 5.3) / No of Stairs
AC = (EW x No of Stairs) / 5.3
AC = (1500 x 1) / 5.3
AC = 283
+
Controlling effective stair width = 1600 mm
Effective Width = (AC x 5.3) / No of Stairs
AC = (EW x No of Stairs) / 5.3
AC = (1600 x 4) / 5.3
AC = 1207

Available maximum capacity of 5 stairs (combined):
Total AC of stairs = 1490

1490 / 4 floors = 372 people per floor
5 floors = 1862 total
or
Total capacity of final exit widths (1980) minus upper floor stair capacity (1490) so that remaining 490 capacity must be located on ground floor.

Buro Happold Fire Engineering Report Occupancy (total):	**2155**
Sanitary Accommodation - Pupil (excl. Acc-WCs):	1680
Sanitary Accommodation – Staff:	150 assumed
Total:	**1830**
Sanitary Accommodation - Pupil (incl. 10 Acc-WCs):	1980
Sanitary Accommodation – Staff:	150 assumed
Total:	**2130**

Summary:		
Sanitary Capacity	1980	
Sanitary Capacity	1680	Worse case if not using Acc-WCs
Final Exit Capacity	1981	
Stairwell Capacity	1490	
	1831	Pupil capacity after removing 150 staff role (TBC)

Appendix A

Holmes Miller - occupancy calculations excel.

5581 Boroughmuir HS Accommodation Review - Appendix A - Calculations

	Level 00	Level 01	Level 02	Level 03	Level 04	**Total**	Notes
Accessible WC	3	3	3	3	3	**15**	excluding acc-changing wc
Learner WC	28	3	20	20	0	**71**	60 + 11 within changing area
Staff WC	2	3	9	8	0	**22**	20 excluding nurse WC / staff Chng
Visitor	0	2	0	0	0		excluded from totals
						108	

School Premises Reg's 1967	Pupils	WCs		
			78	provided (including provision of Acc-WC)
Every 15 pupils up to 60 = 2	60	8		fixed
Every additional 30 up to a total of 300 = 2	240	16		fixed
Every additional 60 over 300 = 2	1620	54		flux (must be even number)
Total	**1920**	**78**		

1560 pupils reqs 66 WC (project BW notes)
1680 pupils reqs 70 WC (current WC provision)
1980 pupils reqs 80 WC (including 10 Acc-WC in provision)

	Stair Width		Exit Width	
Main Entrance			2400	Assumed clear width through revolving doors
Ext Entrance				Excluded
Stair 1	1600	1600	2200	From BH Report
Stair 2	1600	1600	2700	From BH Report
Stair 3	1600	1600	2200	From BH Report
Stair 4	1600	1600	2700	From BH Report
Stair 5	1500	1500	1000	Assumed clear width through stairwell doors
	7500	7900	10500	(minus largest exit)
Occupancy	**1415**	**1491**	**1981**	(/5.3)
	(4 upper floors)			

Building Regulations		Staff
Female (also male where no urinals provided)	1 to 5	1
	6 to 25	2
	Over 25	1 additional WC and WHB for every additional 25 females (or males), or part thereof

Staff - Female	10 WC provided	Allows 225 Occupancy
Staff - Male	10 WC provided	Allows 225 Occupancy
Staff - Combined	20 WC provided	Allows 475 Occupancy

Staff numbers required by Client to offset from fire strategy occupancy

Summary:		
Sanitary Capacity	1920	
Sanitary Capacity	1680	Worse case if not using Acc-WCs
Final Exit Capacity	1981	
Stairwell Capacity	1490	
	1831	Assumed after reducing by 150 staff

Buro Happold Fire Engineering Report Occupancy (total):	**2155**	
Sanitary Accommodation - Pupil (excl. Acc-WCs):	1680	max for 71 WCs
Sanitary Accommodation - Staff:	150	max for 8 WCs
Total:	**1830**	
Sanitary Accommodation - Pupil (incl. 10 Acc-WCs):	1980	max for 81 WCs
Sanitary Accommodation - Staff:	150	max for 8 WCs
Total:	**2130**	

Appendix B

4283 - Building Warrant Notes – rev B

4283	**Boroughmuir HS Extension, for CEC** for **The City of Edinburgh Council**
	Building Warrant Notes – rev B Revised 22 May 2020 (REFER YELLOW HIGHLIGHT FOR REVISIONS)

HOLMES MILLER
Architects

FIRE

Building Type
Assembly building (Multiple Storey – top storey over 11m (18m in 2017 NDTS) above external ground level).

2.1.1 Compartmentation
Maximum Compartment Area:
3000m².

Actual Building Area:
1714 m².
The new extension will be split into 4 compartments at floor level. Level 0 & 1 will form one compartment.

Fire Resistance Duration:
Long (120min). (Medium (60 min) for compartment walls)

2.1.6 High rise buildings
The top most floor will be a compartment floor as it is above 18m

NB Firefighting access level is 800mm above this level – see also 2.14.3 Fire Fighting Shafts

2.4.2 Cavities
The exposed surfaces within the cavity are non-combustible.
Therefore the cavities will be divided every 20m. The cavity barriers will have a short fire resistance duration unless a higher rating is required (at compartment walls etc.)

2.4.6 Cavities in external walls where top most floor is above 11m AEGL
All thermal insulation material within the cavity will be class A1.

2.6.1 Fire resistance of external walls
This is an Assembly Building with a fire suppression system and is more than 1 m from the boundary.
Therefore there is no recommended fire resistance duration for the external walls

2.6.2 Unprotected area
Refer to calculations on drawing AL(0)310

2.8.1 Roof coverings
Less than 6m from boundary = the roof must have a Low vulnerability to fire.
The membrane roof specified has a 'low' vulnerability classification Broof (t4) according to BS EN 13501-5: 2005

2.9.3 Escape Distance:
Assembly Building = Slow evacuation.

15m One Direction.
32m Two Directions.

Plant Room Escape Distance:
18m One Direction.
45m Two Directions.

Roof top Plant rooms (in open air):
60m One Direction.
100m Two Directions.

Two means of escape are provided form the extension roof Refer to AL(0)305.

Place of Special Fire Risk:
There are no places of Special Fire risk in the extension.

Fire Strategy is based upon the occupancy capacity which has been confirmed by the building owner.

2.9.7 Number of exits
Table 2.13 requires 2 exits from levels 2-4 where the number of occupants is 61-600. This is provided.
Table 2.13 requires 1 no. exit for levels G & 1 where number of occupants in 60 or less. This is provided.

2.9.8 Escape Route Widths (Extension):

Occupancy Capacity:
Level G = 60
Level 1 = N/A (WCs only no occupancy)
Level 2 = 84
Level 3 = 123
Level 4 = 135
Total = 342

Each floor (Level 4 take as a worst case scenario):
2 No. exits from levels 2 - 4. 1 No. exit from floors G - 1.

5.3 x OC (level 4)
5.3 x 135 = 716mm

Less than 225 occupants using escape route on each floor:

Doors: 850mm clear width.
Corridors: 1100mm wide minimum (NB these will be a minimum of 1200mm wide to comply with DDA requirements).

2.9.13 Fire & Smoke Control in Corridors:
The central corridor is over 12m long and therefore has been divided in the middle third by a short duration wall with a self-closing fire door (short duration).

2.9.21 Electric locking devices that unlock on electrical power being withdrawn
Escape from the ground floor is via two final exit doors.

The main (front) door is an electrically operated sliding door with access control. This will be connected to the fire alarm system and automatically open, during hours of occupation, in the event of an alarm.
This will also fail open, during hours of operation, upon the withdrawal of power.

The alternative means of escape is via the protected stair. This final exit door will be fitted with panic hardware and can be opened by body pressure alone.

There are less than 60 occupants on the ground floor.

2.9.23 Protected Lobbies
These have been provided

2.9.24 Protected Zones
Escape stairs & protected lobbies are within protected zones.

2.9.30 Temporary Waiting Spaces
These have been provided – refer to stair drawings.

2.9.31 Escape Stair Widths:

Existing School:
4 No. escape stairs.
All escape stairs are accessed via a protected lobby

Occupancy Capacity (existing):
Current FTE staff: = 105
Current roll = 1255
Total = 1360

This is assumed to be split evenly on each floor (5 floors) = 272 per floor

Appropriate capacity (existing):
Total occupants from all floors using stair (Ground floor OC discounted): 272 x 4 floors = 1088.

20% reduction for occupants standing in stair = 1088 – ((1088/100)x20) = 871

Effective width of stairs (existing):
*1No. stair not discounted because each stair is accessed by a protected lobby

Effective width = (5.3x Appropriate Capacity) / No. stairs*

Effective width = (5.3x871) / 4

Effective width = 1155mm

Actual clear width of stairs = 1600mm

Spare capacity in existing stairs:

Maximum capacity of existing stairs:
*1No. stair not discounted because each stair is accessed by a protected lobby

Effective width = (5.3x Appropriate Capacity) / No. stairs*

Actual effective width = 1600mm (clear)

1600 = (5.3x Appropriate Capacity) / 4

AC = (4 x 1600) / 5.3

AC = 1200

This equates to 1200/4 = 300 occupants per stair

Current occupants escaping down each stair = 871 / 4 = 218

Spare capacity per stair: 300 – 218 = **82 occupants**

New Extension:
2 No. escape stairs.

Appropriate capacity (new):
Level 1 = 29 – occupant's shared with ground floor – taken here as worst case scenario.
Level 2 = 111
Level 3 = 123
Level 4 = 135
Total = 398

Total occupants from all floors using stair (Ground floor OC discounted): = 29+111+123+135 = 398

Effective width of stairs (new):

Escape strategy from extension utilises 1 No. stair from the existing building.

The above calculation demonstrates that each existing escape stair has a spare capacity of 82 occupants.

NB 1No. stair not discounted because each stair is accessed by a protected lobby.

Total occupants of new extension = 398

20% reduction for occupants standing in stair = 398 – ((398/100)x20) = 319

82 of these occupants can use the existing escape stair.

This leaves 237 (319 – 82) occupants to escape down the new stair

Effective width = (5.3x Appropriate Capacity) / No. stairs

Effective width = (5.3x 237) / 1

Effective width of new stair = 1256mm

New escape stair will be 1500mm wide.

2.9.35 Construction of Escape Stairs
These will be constructed of non-combustible material

2.9.36 External Walls Adjacent to Protected Zones
Where protected zones are not more than 2m from and form an angle of less than 135° to any part of an external wall of any other part of the building the protected zone will be protected to a distance of 2m with a medium fire resistance duration.

2.9.38 Final Exits
These will have a 1200x1200mm level plat and
A DDA compliant threshold

2.12.1 Vehicular Access Provision:
Vehicular access is provided to all 3 sides of the proposed extension.
Refer to AL(0)210.
Refer to SE drawing E11556-WRD-XX-XX-DR-C-90100 for details of turning provision.

2.12.3 Operating spaces for high reach appliances
Refer to AL(0)200

2.13 Hydrants
There is an existing Fire Hydrant Refer to AL(0)200. All elevations of the extension are within 60m of this hydrant.

2.14.3 Fire Fighting Facilities
One firefighting shaft, comprising: ventilated firefighting stair, unventilated fire-fighting lobby (5m²) & dry riser is provided. The enclosure of this shaft will be long duration to match the elements of structure. Refer to stair drawings.

2.15 Automatic Fire Suppression System:
Will be installed – refer to M&E information.

3 ENVIRONMENT

3.12.5 Sanitary provision:

Student WC provision

WC provision have been based upon confirmed occupancy number provided by the end user.

The toilets in the existing school will be used as these are in excess of the requirements.

Confirmed Numbers (for existing school and proposed extension):

Pupils: 1560

(School Premises Reg's 1967)

Every 15 pupils up to 60	=2	= 8 WCs
Every additional 30 up to a total of 300	=2	= 16 WCs
Every additional 60 over 300	=2	= 42 WCs

1st 60 Pupils
(60 / 15) x 2 = 8

60 – 300 Pupils
((300-60) / 30) x 2= 8

300-1560 Pupils
((1560-300) / 60) x 2 = 42

Total Unisex Appliances Required = **66**

Staff WC provision

Staff : 128 – assumed equal split = 64 Male & 64 Female

Male:

61-75 = **3 WC, 3 WHB & 3 Urinals** 0r **4 WCs & 4 WHB** (per female)

Female:

6-25 = 2 WC & 2 WHB
Over 25 = 1 WC & 1 WHB for every 25:

64-25 = 39
(39 / 25) x 1 = 2 WC & 2 WHB

Total = **4 WCs & 4 WHB**

Total required WC provision

Student: 66 WCs
Staff: 8 WCs & 8 WHB

In the existing school there are (staff and Pupil WCs):

	Pupil	**Staff**
Level -1	30	2
Level 0	4	2
Level 1	23	8
Level 2	22	8
Level 3	2	0
Total existing WCs : 81		**20**

There are sufficient provision for staff and Pupil WC's within the existing school

Public WC Provision (in Ground floor Community Space)

Occupancy for Community Facility is to be restricted to 60 persons as formally confirmed by CEC (refer to separate statement confirming this).

From table 3.8 the WC provision is as follows:

Male (30 occupants) = **1 WC & 2 urinals (or 3 WCs)**
Female (30 occupants) = **3 WCs**

3 No. Unisex WCs, adjacent to the Changing Facilities, are provided on Level 1
3 No. Accessible WC is provided on Levels 0,1,2

Total Staff WCs Provide = 6

NB
2 No. WC's have been provided in lieu of urinals for male staff.
2 further Accessible WCs have been provided on Levels 3 & 4 for pupil use.

3.14 Ventilation:
The building uses a hybrid of natural and mechanical ventilation.

The north facing rooms will all be mechanically ventilated.

South facing rooms will have a mixture of natural and mechanical ventilation.

Ventilation is provided via louvered operable windows. Refer to AC(3)200 Curtain wall and External Door component drawings.

Refer also to M&E engineer's information to be included as part of the stage 5 submission.

3.12.11 Accessible Changing Facilities:

These are provided within the existing main school building.

3.12.12 Baby Changing Facilities
A new Baby Changing Facility is provided within the Accessible Changing Area on Level 1. Refer to drawings AL(0)301 and AL(7)104. Additional facilities also provided within the existing main school building.

4.0 SAFETY:

4.1.1 Car Parking & 4.1.3 Accessible Routes
Accessible car parking within the existing car park will continue to be for staff only & access to the main building entrance is provided as part of the existing building. Refer to drawing AL(0)200 and H11 specification for details of accessible access to the proposed Community Facility.

4.2.2 Corridors
Corridors are 2100mm wide.

4.4 Protective Barriers
Refer to AL(2)171 Stair drawings for details of protective barriers to the stairs and AA(2)105 for the roof barrier component.

All windows to be fitted with 100 mm restrictors

Roof Access
Is required for access to roof mounted plant.
The plant area is enclosed behind a louvered façade.
There is also a perimeter guard rail around the entire roof. Refer to AL(2)105

Access is provided by the existing roof stair way.

A fixed ladder and access hatch provide a second means of escape from the extension roof.

4.8.1 Collisions with projections
All windows to be fitted with 100 mm restrictors.

4.8.3 Cleaning of Windows
Refer to drawing AL(4)300 proposed window cleaning strategy drawing. Continuation of existing approved window cleaning strategy within existing building.

Ground Floor & 1st Floor Levels;
Reach & Wash with water fed pole system from adjacent ground level.
2nd, 3rd, and 4th Floor Levels;
Reach & Wash with water fed pole system from elevated working platform (MEWP)

Paved access is provided around the entire perimeter of the building.

4.8.6 Access to Manual Controls
Louvres providing ventilation are operated by Teleflex pole.
Window opening lights are manually operated by a handle as part of the window system to windows that do not have a projection in front of them.
Windows with a projection of over 900mm in front of them will be operated by Teleflex pole.

Please also refer to drawings AC(7)100 and AC(7)101 and AL(3)300.

6.0 ENERGY:

Maximum U-Values
U-values used within the building are as follows:

Roof: 0.12 W/m²K
Walls: 0.16 W/m²K
Ground Floor Slab: 0.18 W/m²K
Windows & Doors: 1.6 W/m²K

Air Infiltration
The building is designed to not exceed an air infiltration rate of $3m^3(hm^2)$ @ 50Pa.

DG/MG/mg