Appendix 12

Theatre Plan - Theatre Consultant

CAMBRIDGE CORN EXCHANGE

DRAFT STAGE 2 - AUDITORIUM LAYOUT OPTIONS

REVISION P3, 31/10/2024

THEATRE

EXISTING CHALLENGES

The existing auditorium seats up to 1409. For standing events, the overall capacity increases to around 1550 (N.B. this figure includes the standing stalls audience plus the seated balcony audience). The space has a number of challenges. There is extremely limited headroom to the rear of the stalls (to the extent that patrons can hit their heads on the underside of the balcony). 84 of the seats in this rear stalls zone are sold as having 'no view of the stage'. The control booth is very small and the upward sightline for the operator is hampered by the deep overhang of the balcony above.

The retractable seating unit to the rear of the stalls is split into modules to 'wrap around' the substantial existing columns which support the balcony. Due to the modular nature of the seating units and the need to deploy and retract them sequentially, the turnaround time between seating and standing formats is longer than it would be with a single retractable unit.

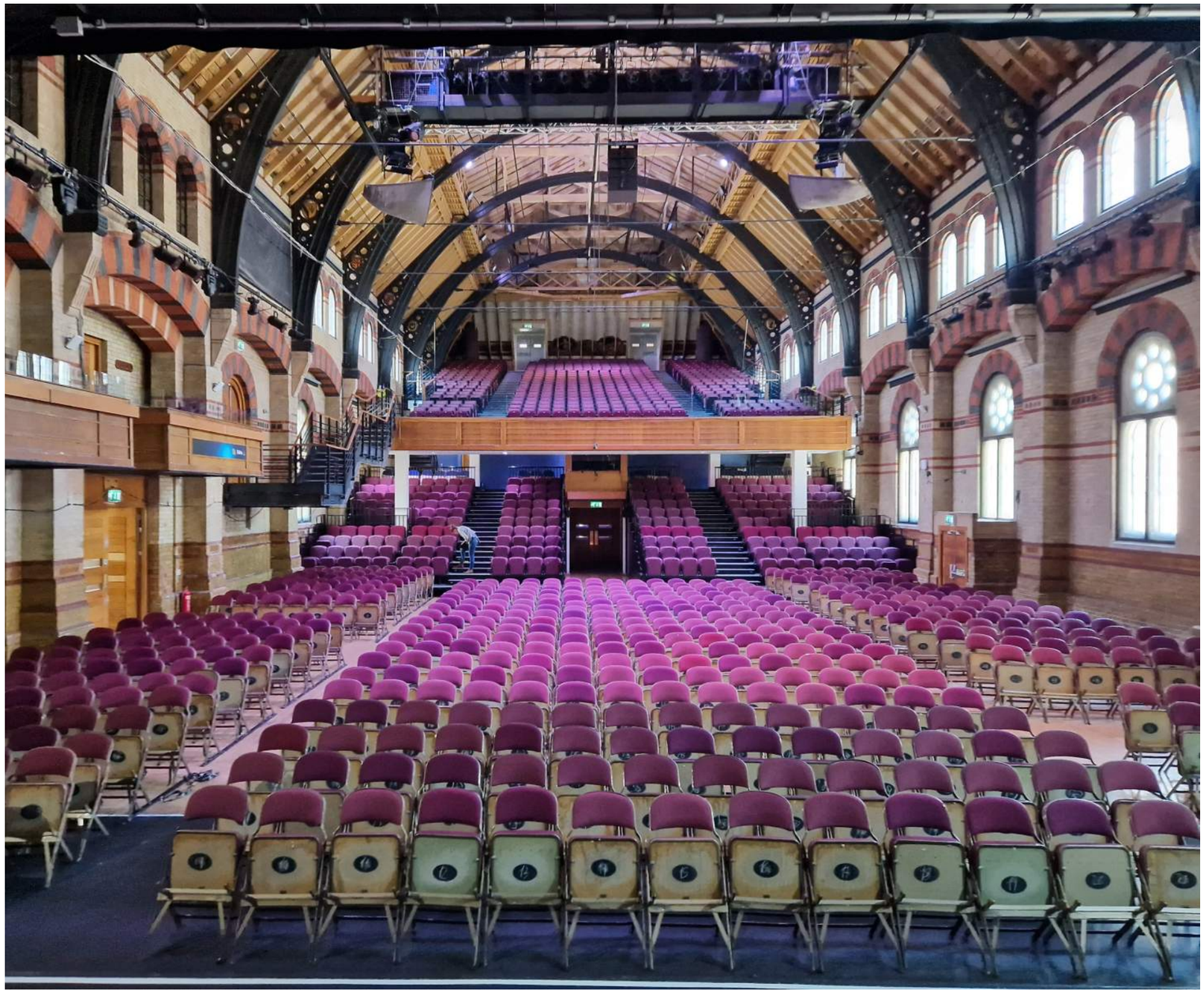
The inset gangways at stalls level (combined with the central vomitory entrance) mean that prime central zones are wasted on circulation rather than seats, whilst the seats are pushed to the sides of the room where sightlines aren't as good. The seats throughout the auditorium have reached the end of their useable life.

The venue's balcony is extremely deep. In addition to the 'letterbox' view that this creates for audience members at the rear of the stalls, it means that the seats towards the back of the balcony feel very remote from the stage. The rake of the balcony is very shallow and the seats are not staggered, meaning that the sightlines from virtually all of the balcony seats are poor. Furthermore, as at stalls level, head height is very limited at the rear of the balcony – due in this case to the eaves of the roof.

Part of the current escape strategy for the balcony is an unsightly stair which crosses in front of the ornate arched windows. An associated crossover row in front of Row A creates a 'gulf' between the seating and the balcony front. Subject to agreement with the fire consultant and building control, the ideal scenario would be to eliminate both this staircase and the widened row.

The balcony has an uncomfortable relationship with the period windows. The balcony insertion has not been sensitively carried out and as such it goes through the middle of the windows rather than working around them.

Wheelchair provision in the existing auditorium is limited. Wheelchair positions are located within the 2 side boxes and on the flat floor. There are no wheelchair positions on the main balcony. For an auditorium of this capacity, the number of wheelchair positions should equal 1% of the seating capacity - i.e. 14 positions (though these do not have to be permanent). The wheelchair spaces should be distributed throughout the auditorium to offer a choice of vantage point.

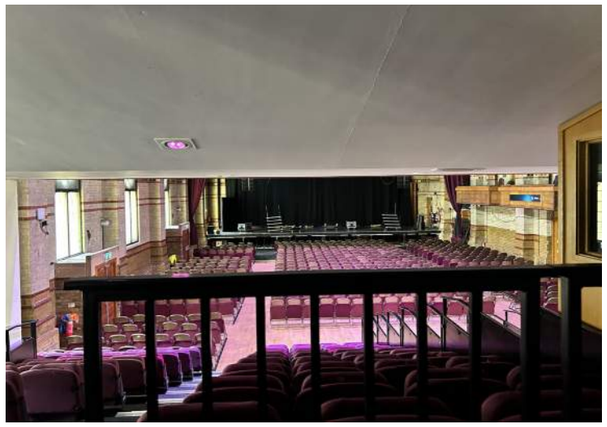


The existing auditorium looking from the stage.

EXISTING CHALLENGES



Seats are narrow with constrained legroom. They don't provide the comfort levels modern audiences expect and they are looking tired.



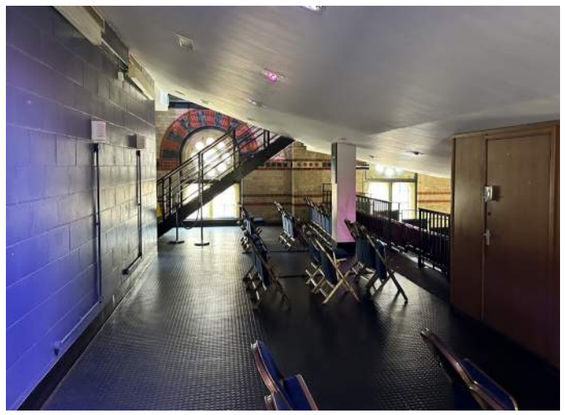
'Letterbox' view at the rear of the stalls due to the deep overhang. 84 seats at the rear of the stalls are sold as having no view of the stage.



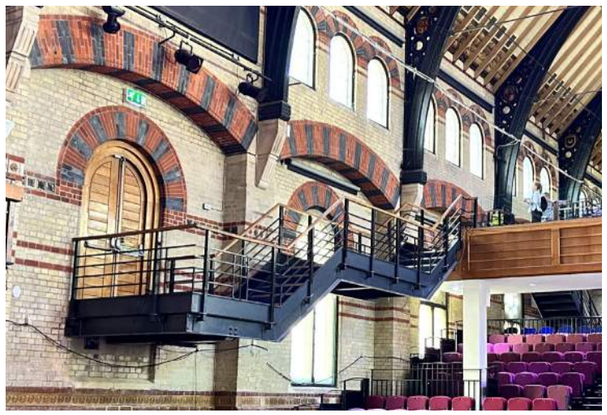
With its convoluted arrangement wrapping around the columns, the retractable unit is more complex to operate, extending turnaround times.



Inset gangways occupy prime, optimum sightline positions where there should be seats (whilst the seats are pushed to the perimeter).



Audience members can bang their heads on the underside of the balcony - a major safety hazard. This zone feels claustrophobic.



Escape stair is visually obtrusive within the space.



Shallow balcony rake means a reliance upon looking through a glass rail (rather than looking over a solid rail). This creates distracting reflections.



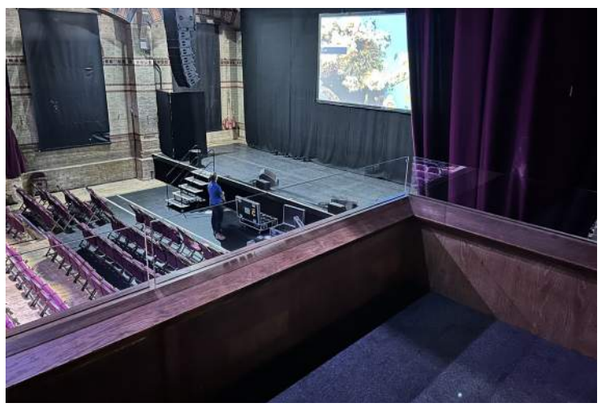
Balcony level sightlines are very poor as the rake is not steep enough and the seats are not staggered.



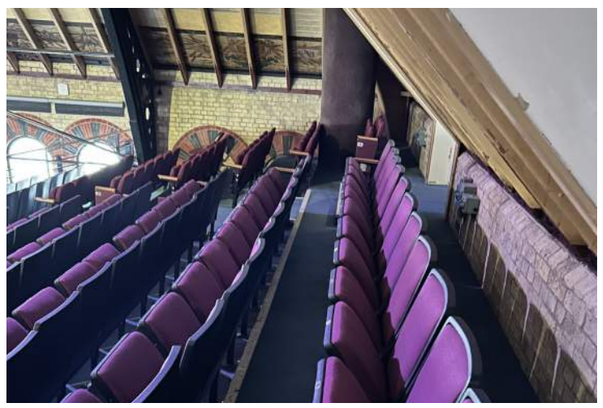
The balcony has not been sensitively inserted in relation to the period windows. The photo above also shows the mismatched seats.



The back of the Balcony feels very remote from the stage.



Under-provision of wheelchair spaces. For the existing seating capacity, 14 wheelchair positions should be provided in a variety of locations.



Head height is very constrained to the back row of the balcony as this sits right underneath the eaves.

ROW SPACINGS AND SEAT WIDTHS

Row spacings

The guidance in the *Technical Standards for Places of Entertainment* ('Yellow Book') is that, depending upon the design of the seat, 'good practice' row spacing is between 850mm and 900mm back-to-back. The current retractable seating unit has row spacings of approximately 840mm. The current fixed seating at balcony level is generally at around 815mm back-to-back.

In the proposed options:

- Option A has more compact row spacings than the other options. The flat floor seating and rear stalls seating is at 850mm back-to back. The retractable unit row spacings are 875mm. At balcony level, the row spacings remain as existing (i.e. below 'good practice' guidelines) since there is no re-raking in this option.
- Option B, C and D have 900mm row spacings at both stalls and balcony level.

Seat widths

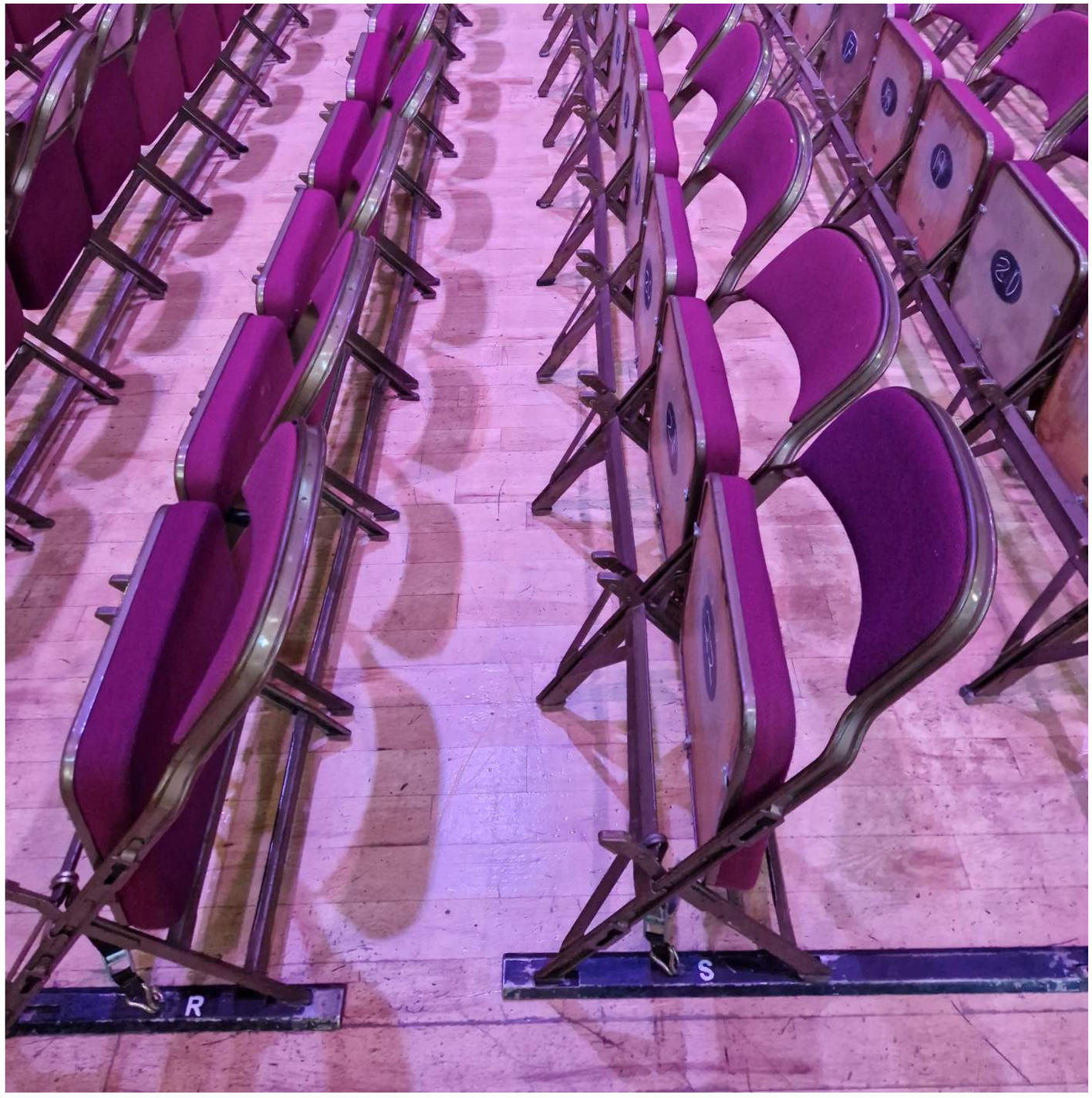
The guidance in the *Technical Standards for Places of Entertainment* is that for seats with armrests, the minimum width requirement is 500mm - but 'good practice' is at least 525mm-550mm. For seats without armrests, 450mm is the minimum, but the good practice recommendation is at least 500mm.

The existing folding seats in the stalls are at 460mm centres (no armrests) and the retractable unit seats are at 475-480mm centres (no armrests). At balcony level, the seats with armrests are generally at 500-510mm centres and the seats without armrests are at approximately 450mm centres.

In the options proposals on the following pages, we have kept seat widths narrower than we would ordinarily recommend so as to try and limit the loss in capacity (given the narrow existing seat widths). In the proposed options, seat widths are generally 500mm, with a small number of 525mm and 550mm seats to give a straight edge to gangways.

In Option A, the more compact row spacings mean that flip-up armrests or no armrests would be required to achieve the required stalls seatway dimension. To reinstate the existing seat count at balcony level in Option A, some seats would need to remain less than 500mm wide. To bring all seats up to min. 500mm in Option A would mean losing 8 balcony seats.

The armrests vs. no armrests issue can be discussed in further detail at the next design stage. It would make sense to adopt a consistent approach throughout the auditorium.



The existing stalls seating.

FLAT FLOOR SEATING

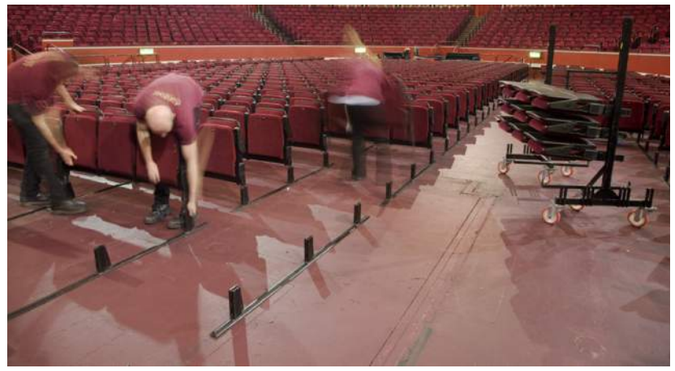
A number of layout options have been explored for the auditorium. Each has both pros and cons and some involve more drastic (and therefore more costly) remodelling of the space than others. For instance, the options which re-rake the balcony dramatically improve the sightlines and legroom at this level, provide a much better control room view, and offer the opportunity to create additional wheelchair positions (at the rear). However, this comes at the expense of losing a large number of seats. Similarly, the options which provide the largest area of increased foyer space at first floor level reduce the number of seating rows within the auditorium.

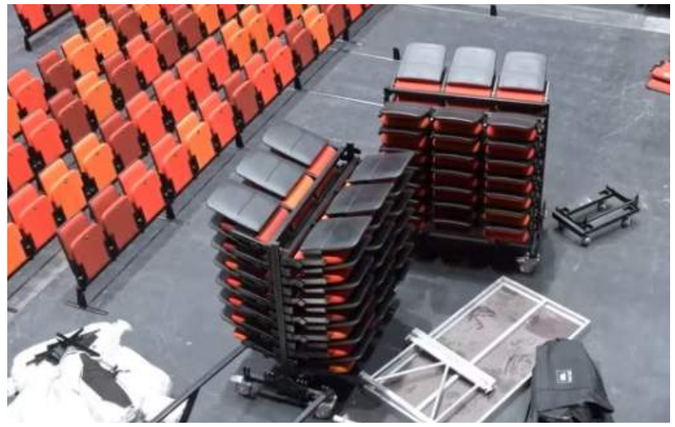
Stalls flat floor seating
Although the exact amount varies between the different options, a large portion of the stalls seating will inevitably need to remain on the flat floor so that the seating can be removed for a standing audience. The exact nature of this flat floor stalls seating will be explored in more detail at the next design stage. Several systems could be considered:

Flat floor seating - Option 1
The 'baseline' option from a cost perspective would be something like the Hussey Logix system or the Audience Systems Matrix system. These fixing free systems use removable floor bars and theatre-style seats with a flip-up seat pan. They are the 'default' option for venues of this type where large numbers of seats are required on the flat floor. The floor bars keep the row spacings consistent and prevent the rows from 'snaking'. The self-tipping seats allow for closer row spacings than would be possible with stacking chairs. With these systems there is the option to configure the seating in different layouts if, for instance, the venue decided to build a thrust or catwalk style stage or hold a performance in the round. The seats and floor bars stack on trolleys. The trolleys are designed to suit the specific project. Ideally, the trolley dimensions would be tailored around at least some of the seats being stored underneath the stage. A detailed storage study will be developed with the seating manufacturer at the next stage of design. Early discussions with seating manufacturers suggest that motorised trolleys may be the best option in order to make use of the full depth of the under-stage zone. The biggest drawback of Option 1 is the fact that the seating is quite time-consuming and labour intensive to set out (particularly where there is some variation in seat width to allow for a stagger whilst achieving neat row ends).

Flat floor seating - Option 2
The more 'involved' option would be to use a product such as the Figueras Mutarail system, where the deployment of the seats is automated (with the seats running within recessed floor guides). Operationally, this system offers considerable time savings as the space can switch between seated and standing mode at the touch of a button. The number of technicians required to reconfigure the space is minimal and there is no manual labour. However, storage of the seats underneath the stage does not seem viable as the existing stage is relatively low and so there isn't sufficient space to accommodate the sort of very deep beam which would be required along the leading edge of the stage to provide an uninterrupted span. Once the span is divided by columns, it becomes difficult to make such a system work efficiently without losing seats (particularly when the rows are staggered). To make the Mutarail system work, the best approach would probably be to make the 2 pit lifts into double decker lifts, where the seats can be stored on the lower deck. With their existing footprint, the pit lifts would accommodate approximately 20-21 of the stored seating rows – so they would need to be enlarged in order to store the remaining 6-7 rows. The depth of the existing pit would likely need to be increased to accommodate the double decker lifts (although this will not be known until a measured survey of the pit is carried out at the next work stage). The cost of the excavation and modifications to the pit envelope, the new double decker lifts and the seating system itself would therefore make the Mutarail a significantly more expensive option. The Mutarail system relies upon a fixed, end stage layout. It does not give the option to do thrust stage / in the round configurations etc.

Flat floor seating - Option 3
The final option falls somewhere between the Logix/Matrix systems and the Mutarail system. This is products such as the Figueras Mutawheel system and the Kotobuki K-Roll system. Such systems consist of groups of 6-7 seats on wheels. The doubling up of armrests between each group means that the seating capacity would be slightly reduced using this system (compared to the currently drawn layouts). The smaller seat groupings could potentially open up the possibility of dividing up the stage edge span with more supporting columns than the Mutarail system allows (with a view to storing seats underneath the stage). However, given that there is less than 150mm depth to play with for the leading edge of the stage (to achieve the required clearance height for storing seating underneath), this would still be very challenging – even with the span broken up by columns. A detailed design exercise would be required (working with the structural engineer and the seating manufacturer) to determine whether storage underneath the stage is feasible or not. Furthermore, if storage underneath the stage does prove viable, it is unlikely that all of the seats could be accommodated here - so some would still need to stored elsewhere (or a similar double decker lift option could be considered as in Option 2). As this is a manual system, operators would need to crawl underneath the stage to retrieve the seats stored towards the back (or seats would have to be hooked out in some way using a pole or similar) – which is less than ideal. Cost-wise, this option would fall somewhere between Option 1 and Option 2.









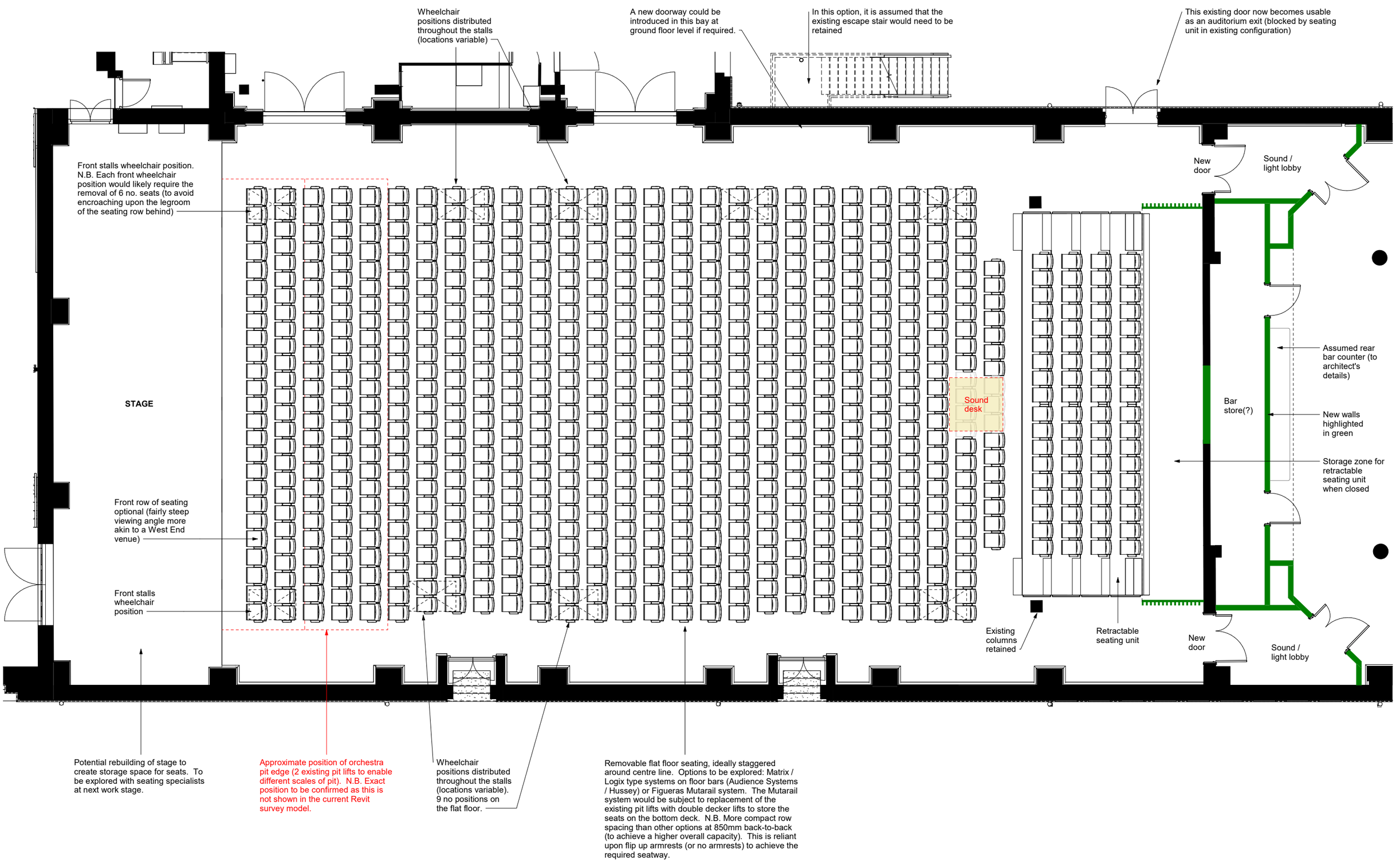
Top 2 images: Option 1 (in this case the Audience Systems Matrix system, though the Hussey Logix system is very similar)

3rd image: Option 2 (Figueras Mutarail system)

Bottom image: Option 3 (in this case the Figueras Mutawheel system, but the Kotobuki K-Roll system is very similar)

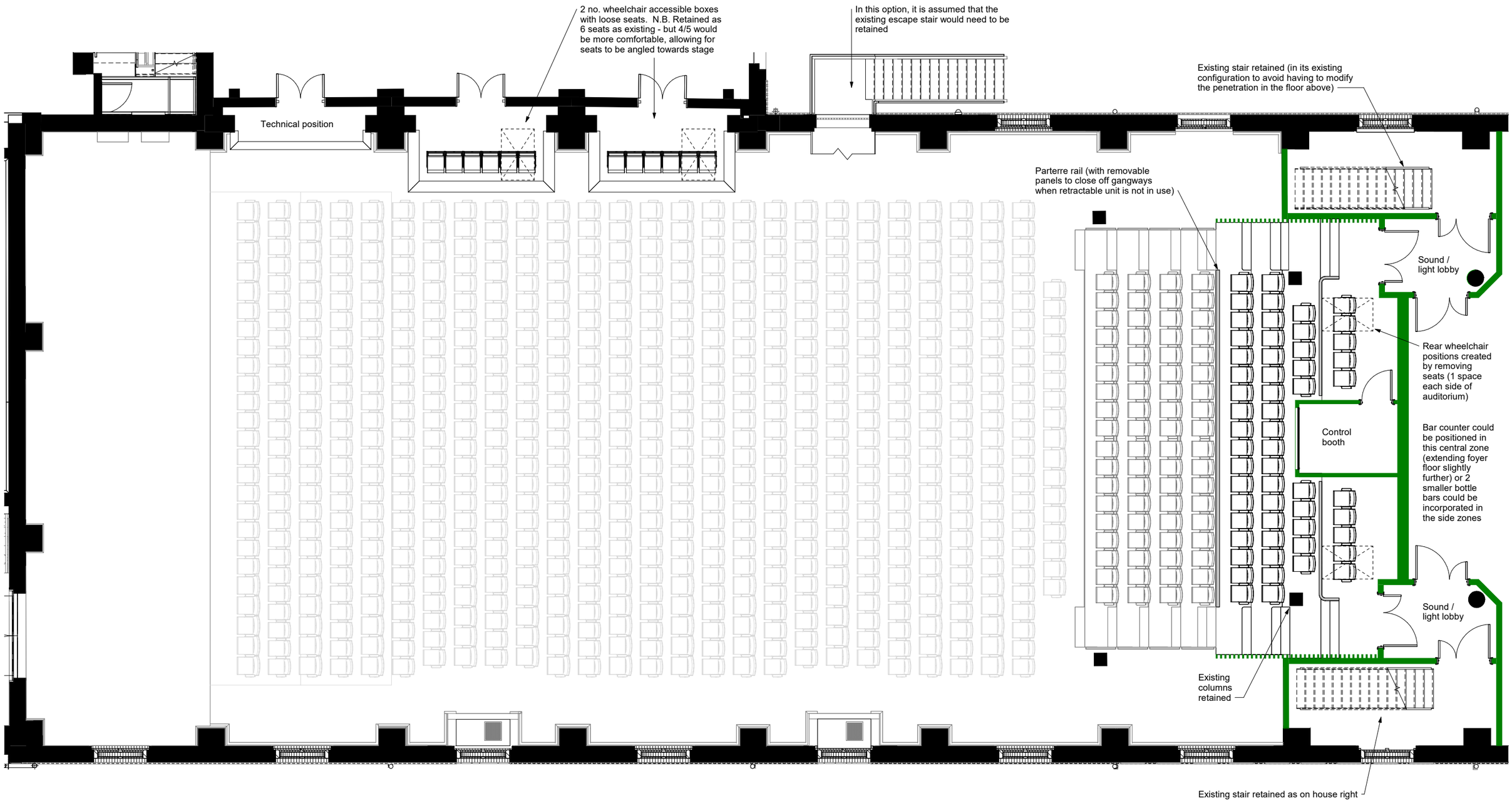
STALLS OPTION A1 (& A2)

Ground floor plan



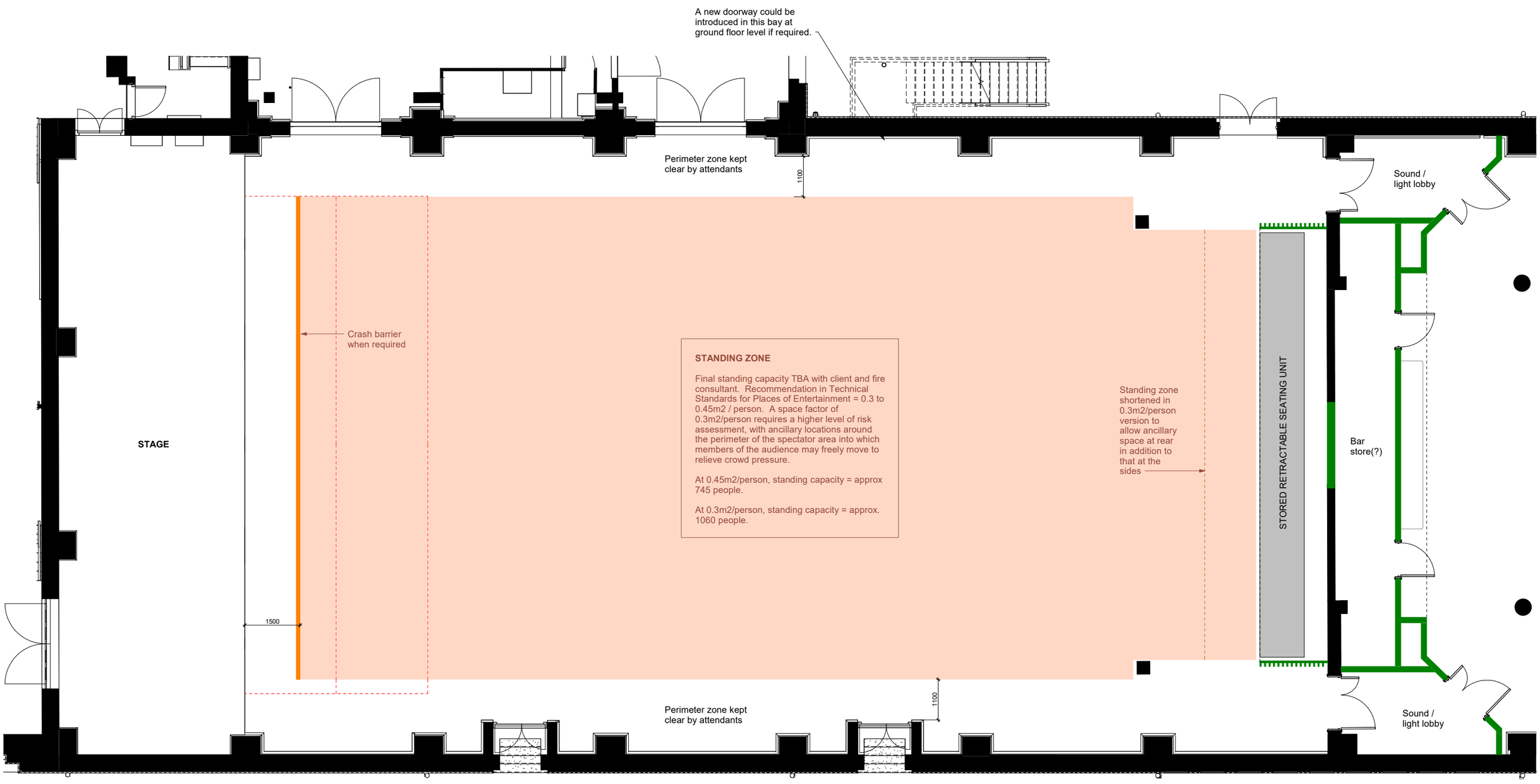
STALLS OPTION A1

First floor plan



STALLS OPTION A1

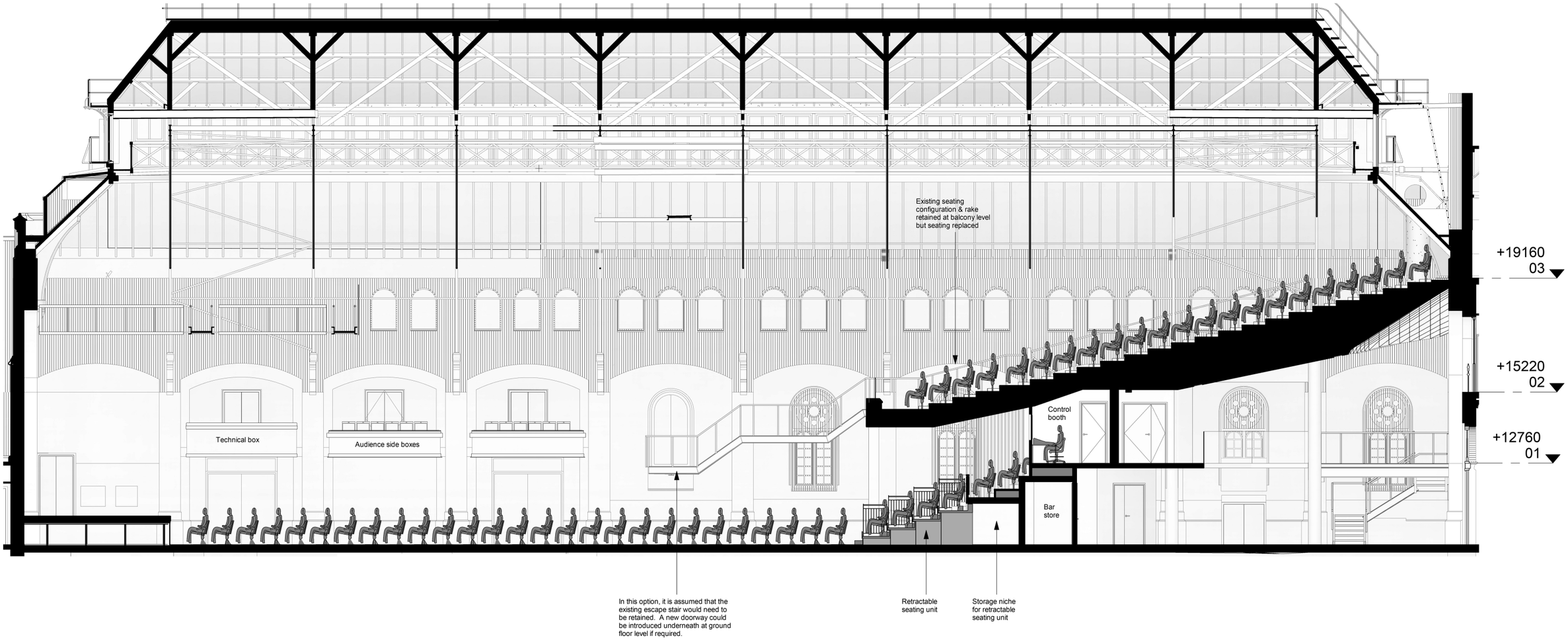
Ground floor plan - Standing Event



N.B. This standing layout also applies to Option A2

STALLS OPTION A1

Long section



Seating Capacities (without extended stage or orchestra pit)

Stalls capacity (allowing for sound desk)
798 seats (or 754 with 11 wheelchair positions)

Balcony capacity (including boxes)
496 seats (or 492 seats with 2 wheelchair positions)*

TOTAL = **1294** (or 1246 with 13 wheelchair positions)
**N.B. This figure assumes that the existing balcony layout is re-instated, but with a minimum seat width of 500mm – i.e. 6 less seats than in the existing layout.*
If possible, we would recommend omitting a further 18 seats - those in Row YY (where head height is very constrained) and a couple of seats from the side boxes (to create more space here). If these seats were omitted, it would bring the overall auditorium capacity to 1276.

Standing events (without extended stage or orchestra pit)

Stalls standing capacity *(N.B. This may be slightly reduced by up to approx. 35 people where travelling bands set up their own control booth in the flat floor zone - booth size varies)*
745 (if allowing 0.45m2/person) or 1060 (if allowing 0.3m2/person)

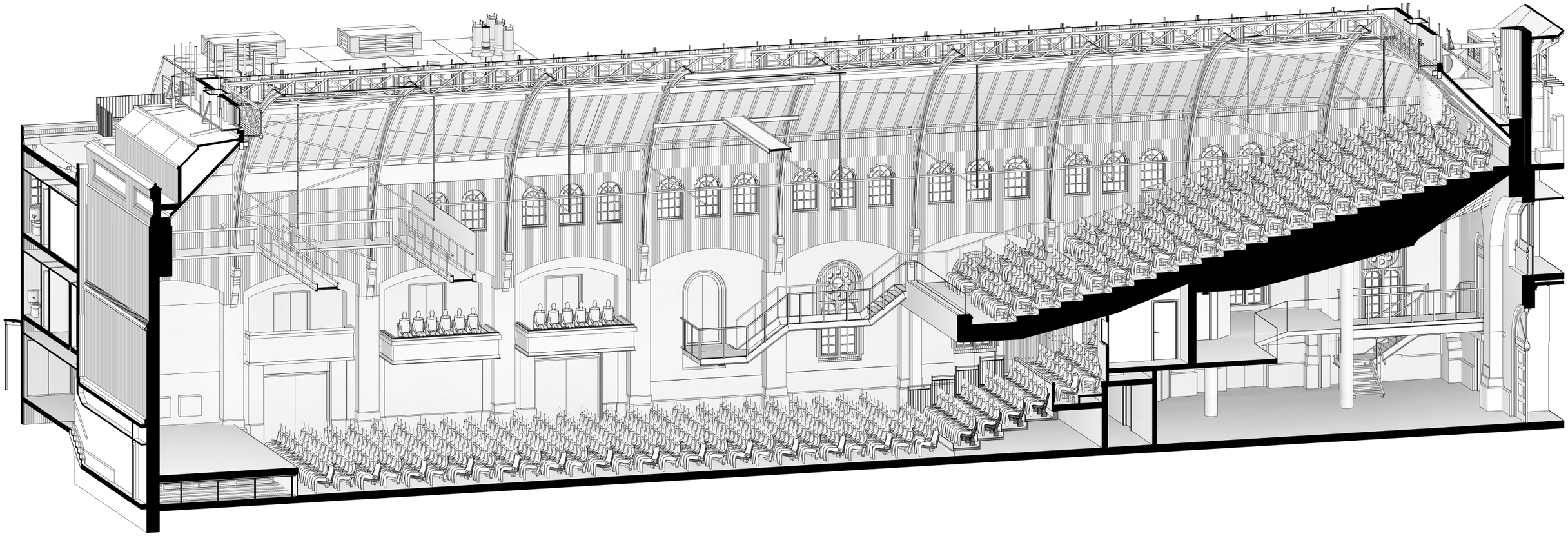
Rear stalls seated capacity
56 seats (or 52 seats with 2 wheelchair positions)

Balcony capacity (including boxes)
496 seats (or 492 seats with 2 wheelchair positions)*

TOTAL (at 0.45m2/person) = **1297** **(or 1289 with 4 wheelchair positions)**
TOTAL (at 0.3m2/person) = **1612** **(or 1604 with 4 wheelchair positions)**
**See left hand note regarding balcony capacity*

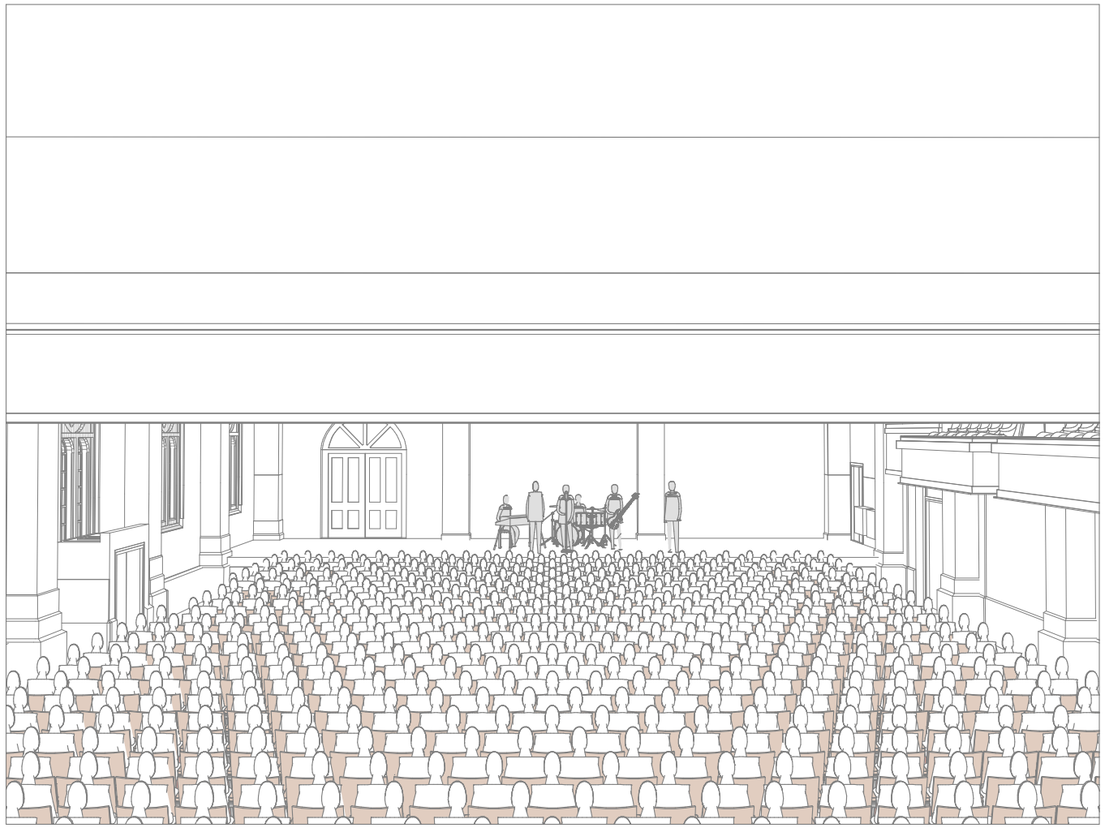
STALLS OPTION A1

Perspective section



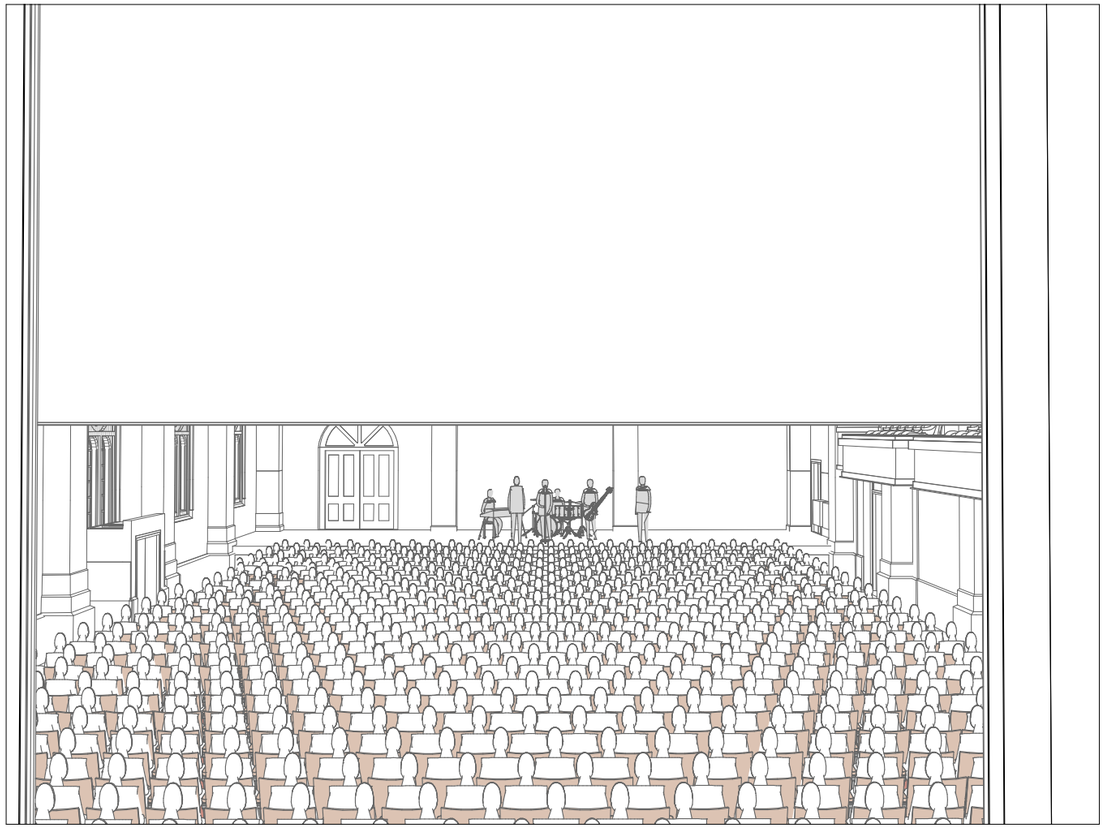
STALLS OPTION A1

Control room sightline



Existing control room sightline

The existing control room sightline is not particularly good due to the deep balcony overhang, which creates a 'letterbox' view for the operator. Their upward sightline is compromised.



Proposed control room sightline - Option A

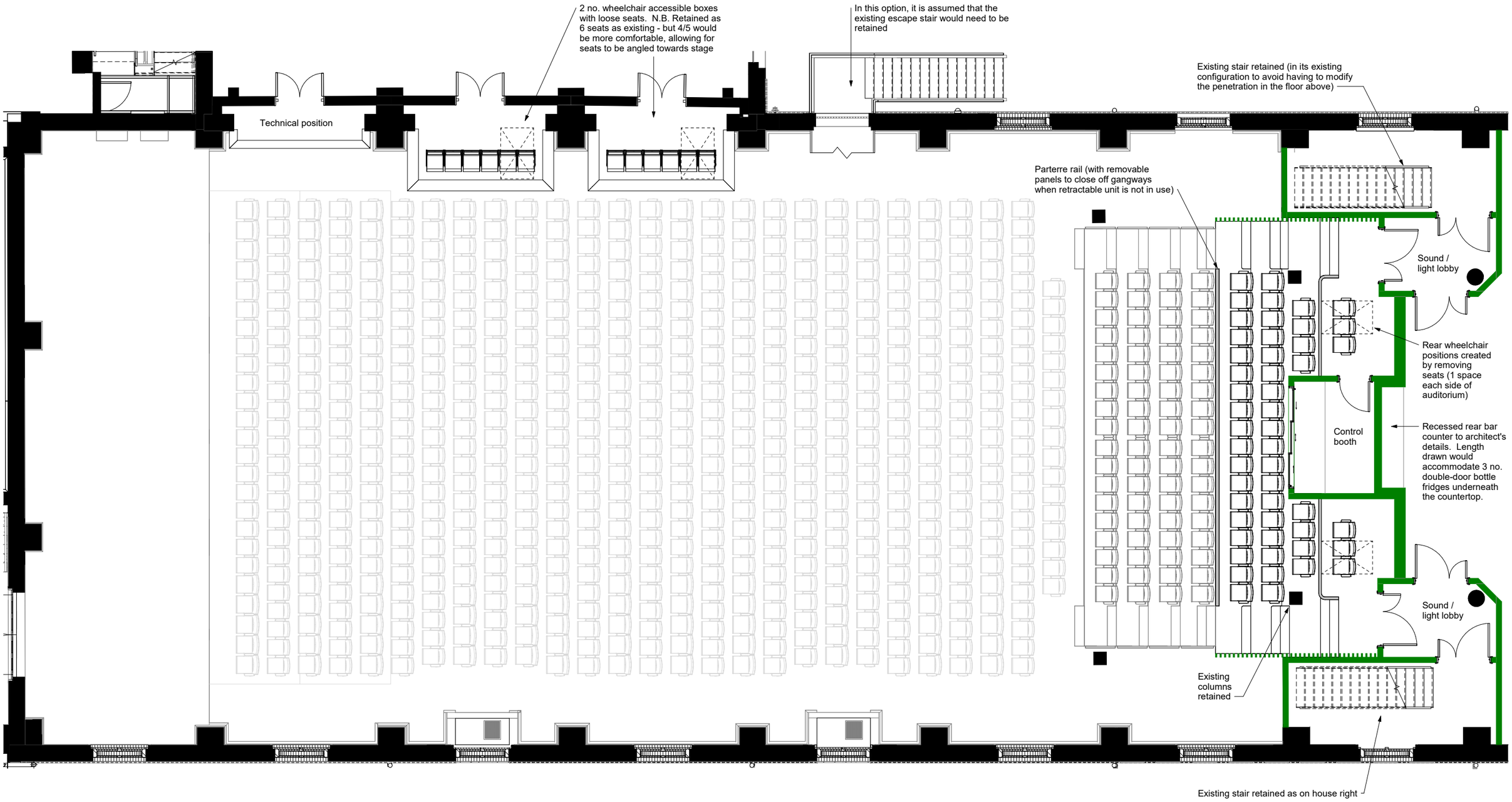
Option A is the only option which keeps the control room at stalls level. The other options relocate it to balcony level to improve the operator's view. In Option A, the control booth is shifted back slightly in order to improve the rear stalls seating layout. This technically makes the operator's sightline slightly worse than it is at the moment, although as the image above shows, this difference is barely discernible. The 'less than ideal' control room sightline in Option A is one of the trade-offs against the benefit of the higher seat count.

Sound is not controlled from this booth - it is controlled from a sound desk on the flat floor (so that it is not distorted by the balcony overhang). Only lighting is operated from the enclosed booth.

STALLS OPTION A2

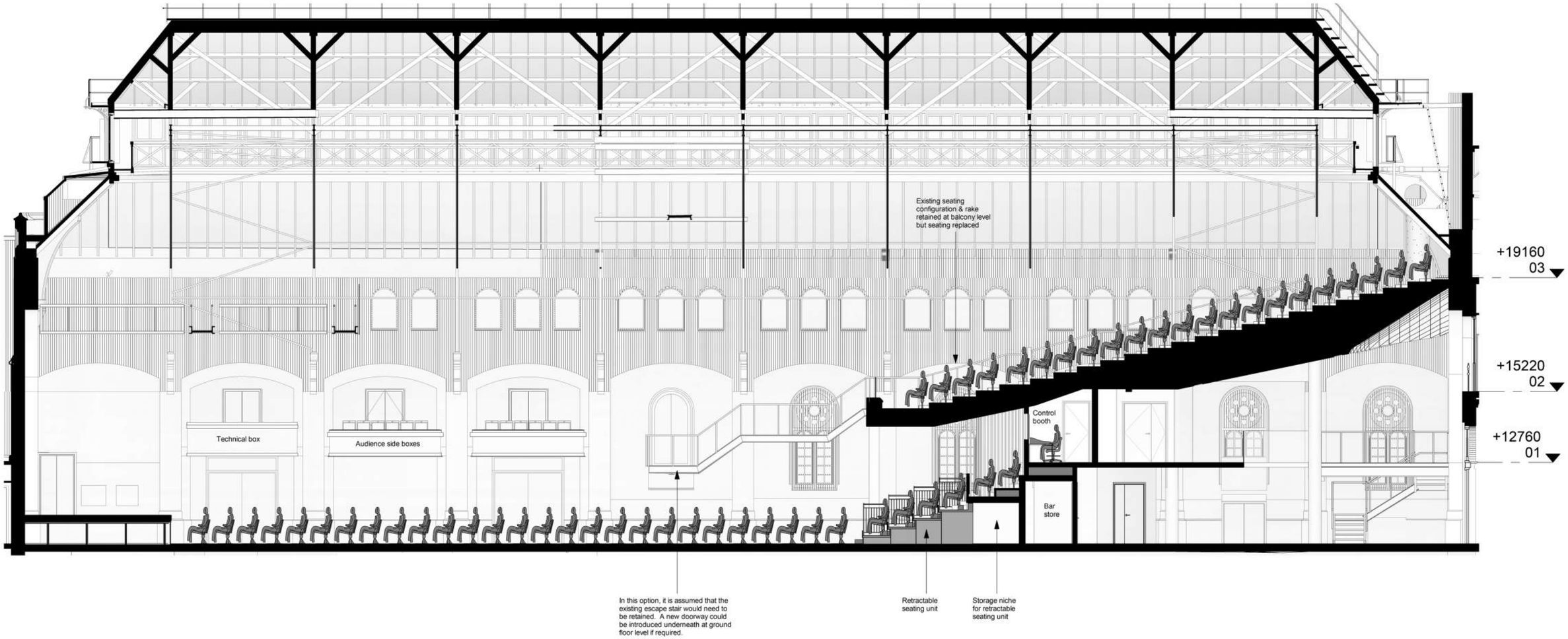
First floor plan (Ground floor plan is as per Option A1)

N.B. This is the option that forms the basis of the Stage 2 plans.



STALLS OPTION A2

Long section



Seating Capacities (without extended stage or orchestra pit)

Stalls capacity (allowing for sound desk)
792 seats (or 748 with 11 wheelchair positions)

Balcony capacity (including boxes)
496 seats (or 492 seats with 2 wheelchair positions)*

TOTAL = **1288** (or 1240 with 13 wheelchair positions)
**N.B. This figure assumes that the existing balcony layout is re-instated, but with a minimum seat width of 500mm – i.e. 6 less seats than in the existing layout.*
If possible, we would recommend omitting a further 18 seats - those in Row YY (where head height is very constrained) and a couple of seats from the side boxes (to create more space here). If these seats were omitted, it would bring the overall auditorium capacity to 1270.

Standing events (without extended stage or orchestra pit)

Stalls standing capacity *(N.B. This may be slightly reduced by up to approx. 35 people where travelling bands set up their own control booth in the flat floor zone - booth size varies)*
745 (if allowing 0.45m2/person) or 1060 (if allowing 0.3m2/person)

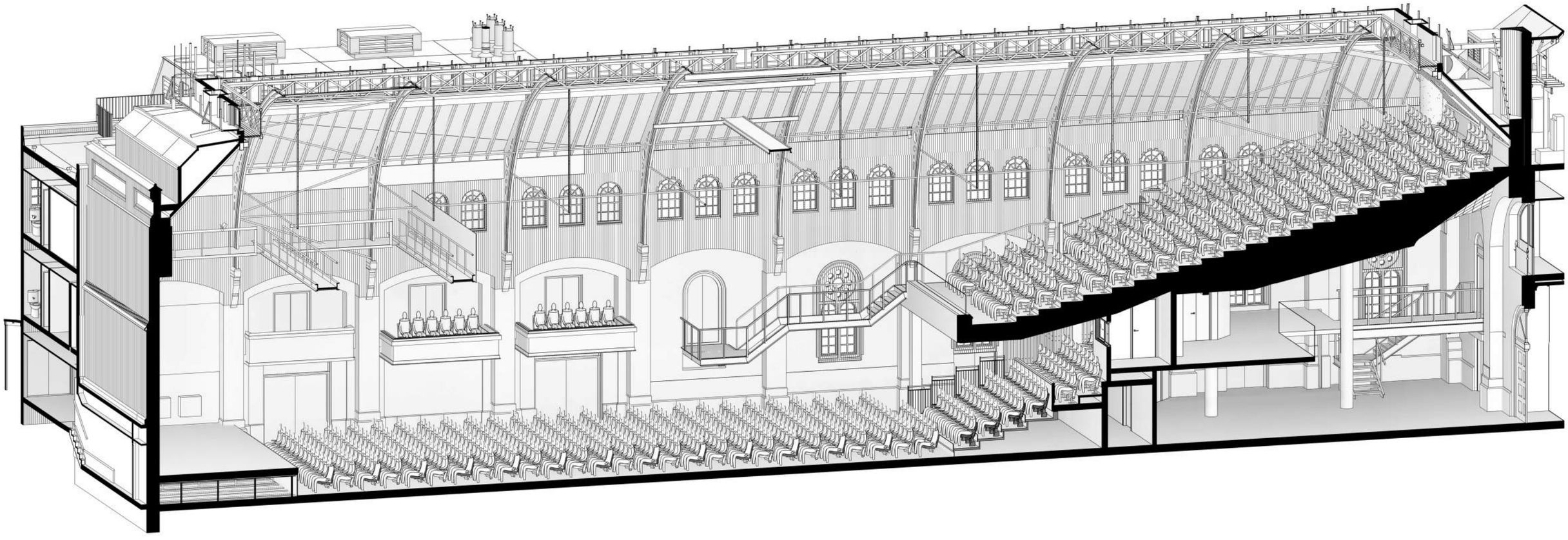
Rear stalls seated capacity
50 seats (or 46 seats with 2 wheelchair positions)

Balcony capacity (including boxes)
496 seats (or 492 seats with 2 wheelchair positions)*

TOTAL (at 0.45m2/person) = **1291** **(or 1283 with 4 wheelchair positions)**
TOTAL (at 0.3m2/person) = **1606** **(or 1598 with 4 wheelchair positions)**
**See left hand note regarding balcony capacity*

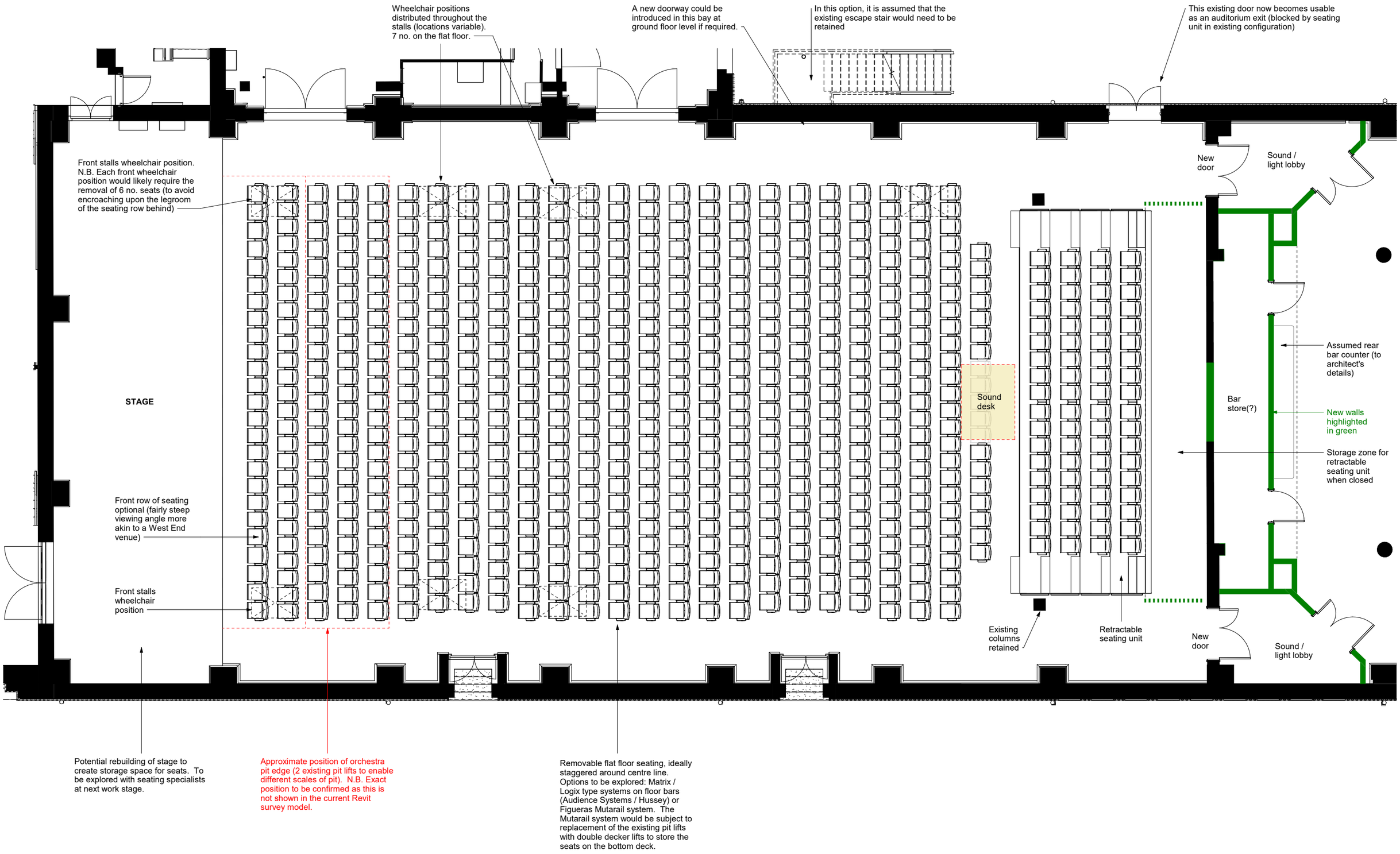
STALLS OPTION A2

Perspective section



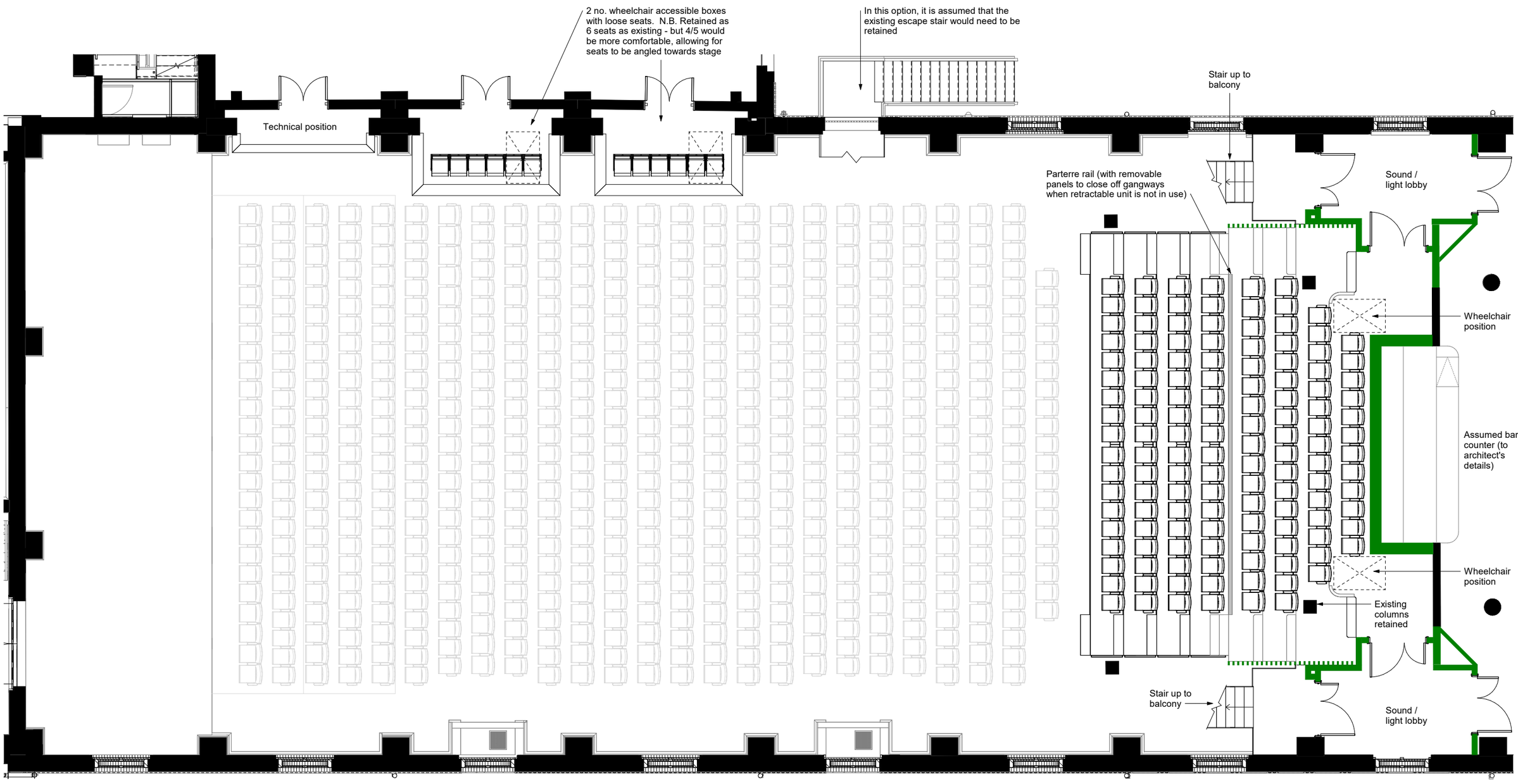
STALLS OPTION B

Ground floor plan



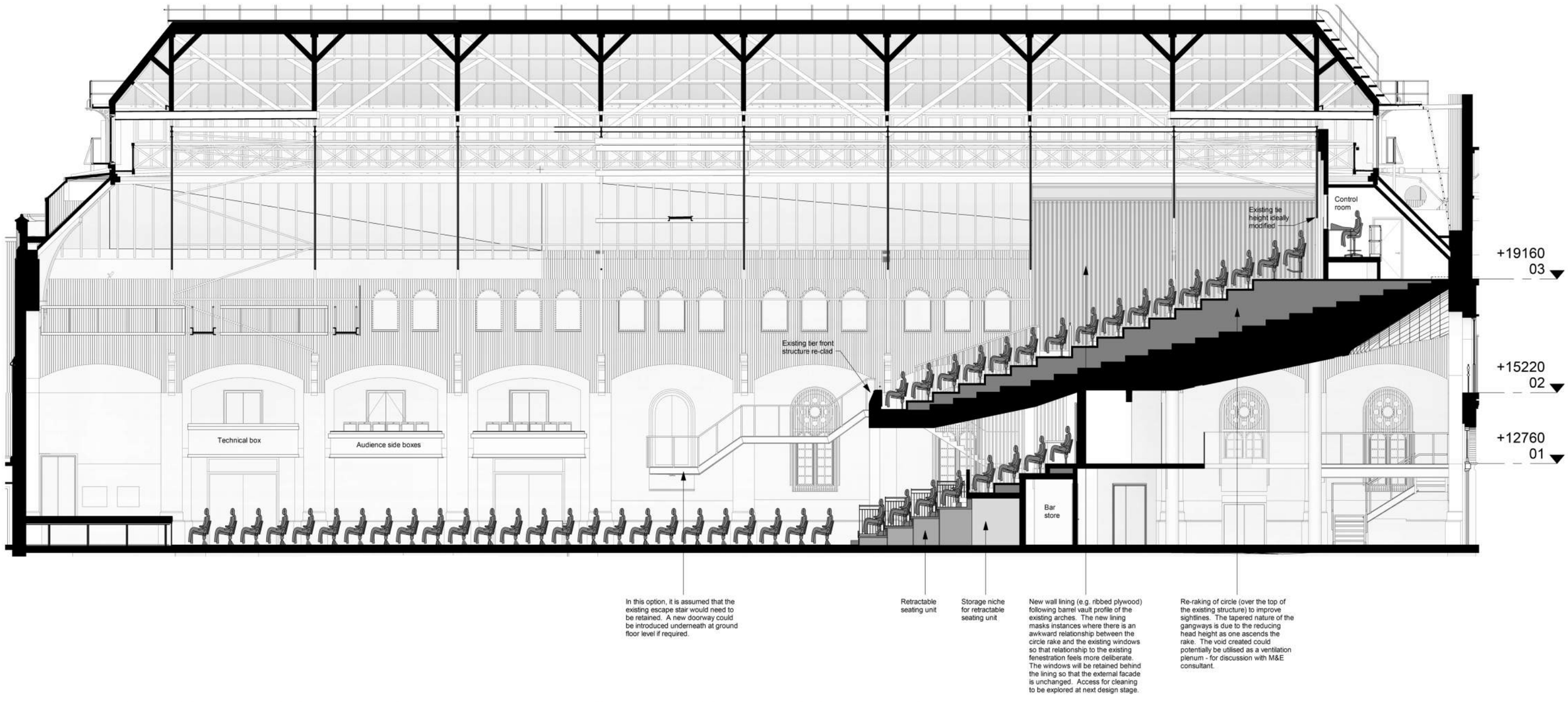
STALLS OPTION B

First floor plan



STALLS OPTION B (WITH BALCONY RE-RAKING)

Long section



Seating Capacities (without extended stage or orchestra pit)

Stalls capacity (allowing for sound desk)
757 seats (or 725 with 9 wheelchair positions)

Balcony capacity (including boxes)
308 seats (or 304 seats with 2 wheelchair positions)

TOTAL = **1065** (or 1029 with 11 wheelchair positions)

Standing events (without extended stage or orchestra pit)

Stalls standing capacity *(N.B. This may be slightly reduced by up to approx. 35 people where travelling bands set up their own control booth in the flat floor zone - booth size varies)*
745 (if allowing 0.45m2/person) or 1060 (if allowing 0.3m2/person)

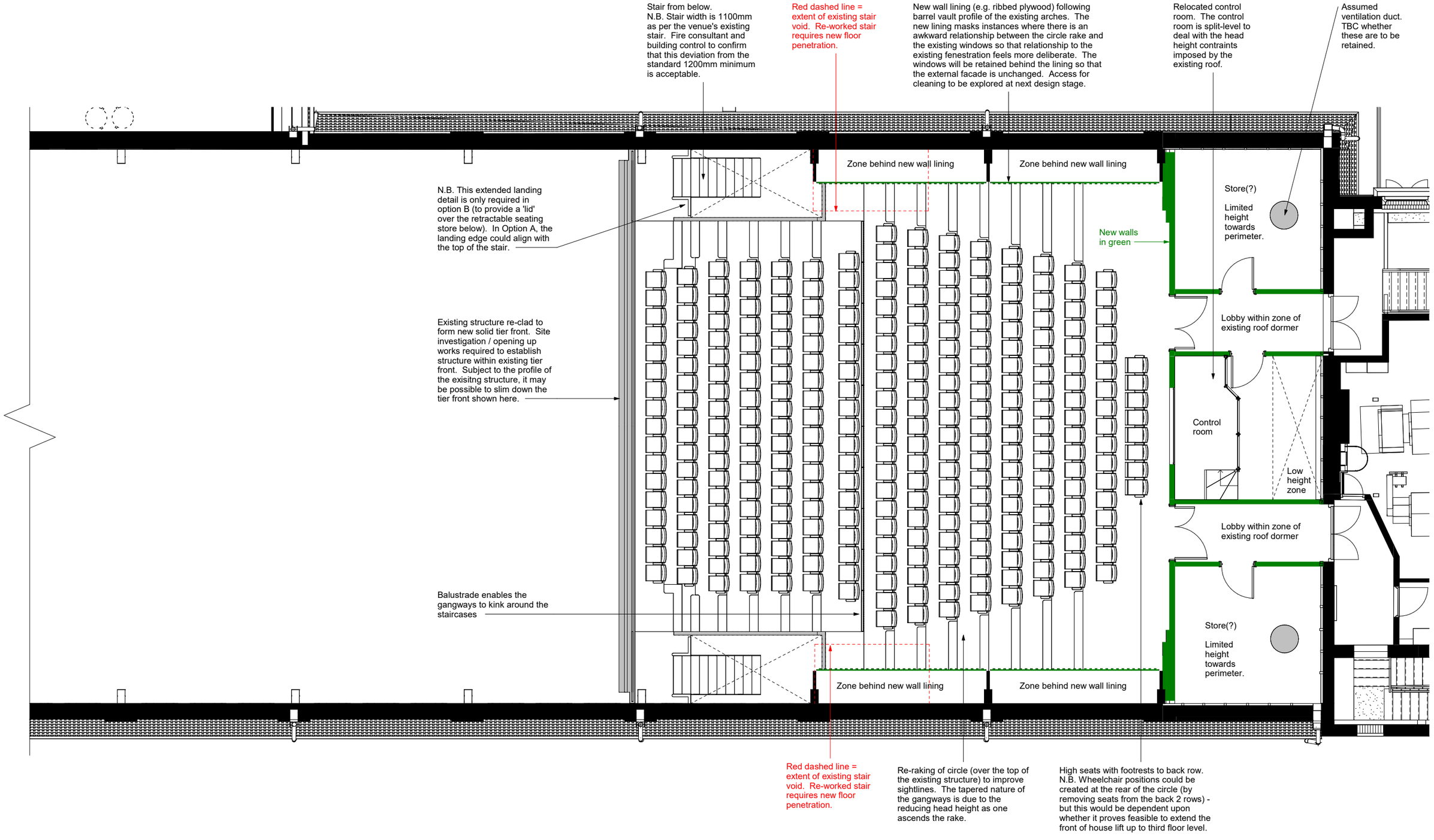
Rear stalls seated capacity
62 seats with 2 permanent wheelchair positions

Balcony capacity (including boxes)
308 seats (or 304 seats with 2 wheelchair positions)

TOTAL (at 0.45m2/person) = **1115** **(or 1111 with 4 wheelchair positions)**
TOTAL (at 0.3m2/person) = **1430** **(or 1426 with 4 wheelchair positions)**

BALCONY RE-RAKING OPTION

Second/Third floor plan



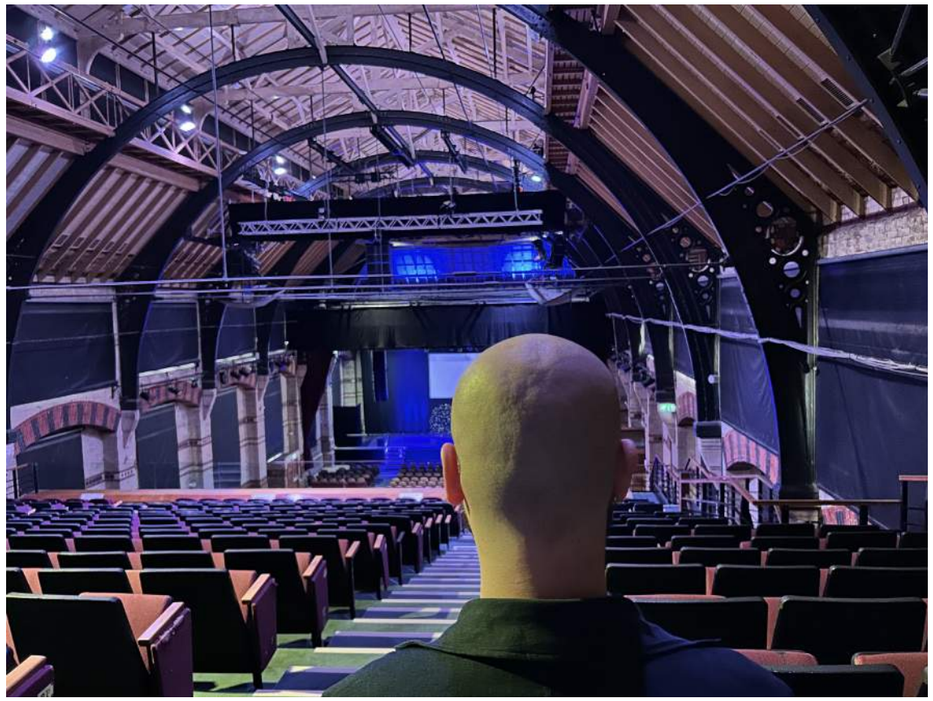
BALCONY RE-RAKING OPTION

Sightlines comparison

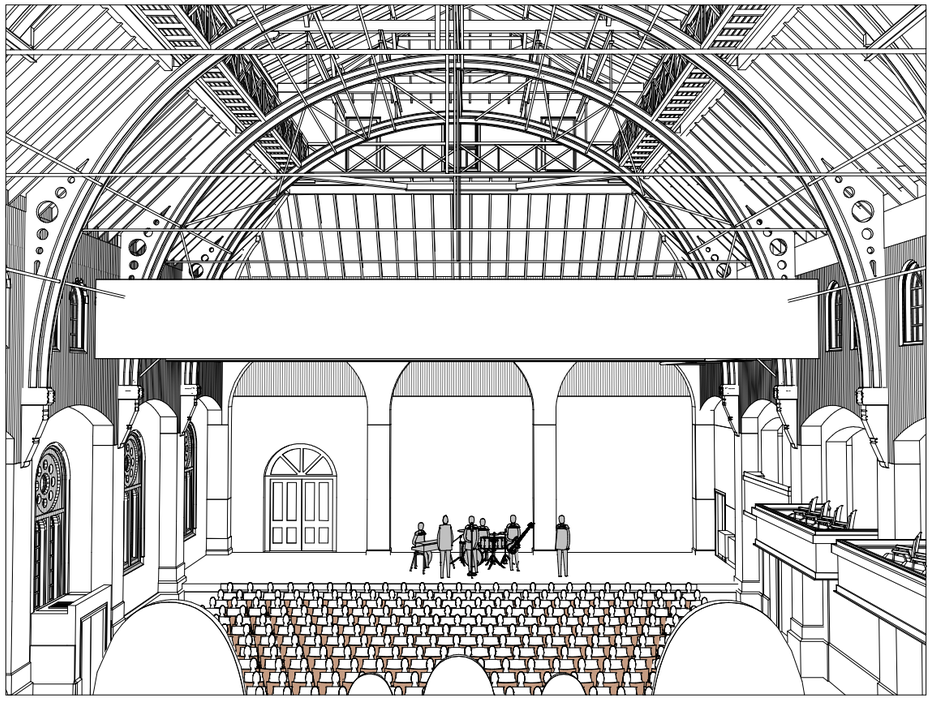


The existing balcony seats have generally poor sightlines due to the shallow rake and the absence of a stagger between seating rows. Whilst it would reduce the seating capacity, re-raking the balcony would considerably improve the sightlines (and legroom). The plenum created could potentially be used for under-seat supply ventilation. Wheelchair positions could be provided at the rear of the balcony (subject to third floor lift access).

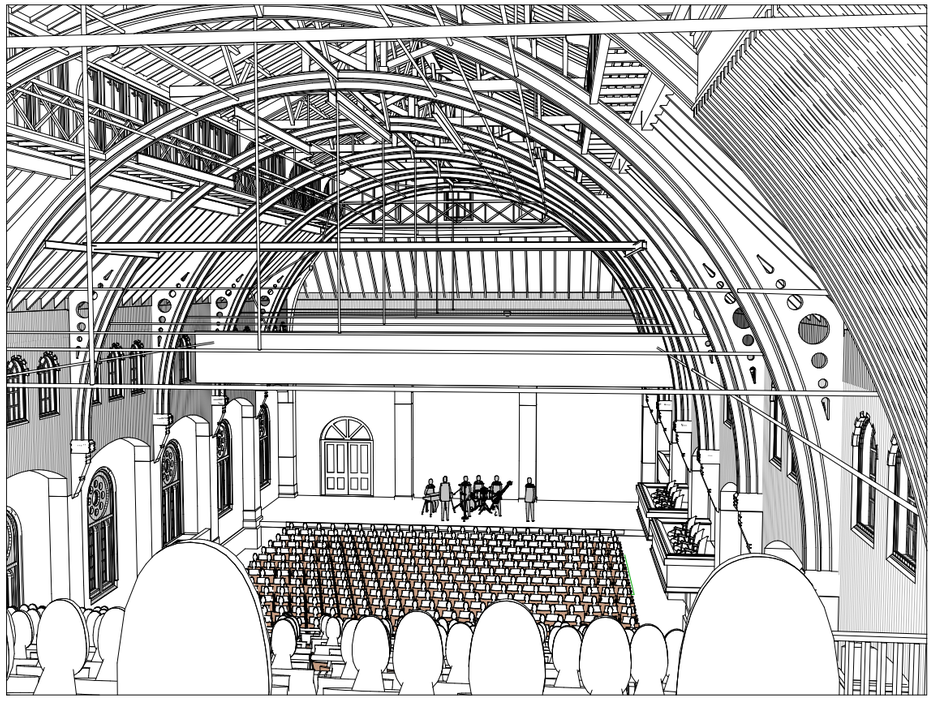
Existing sightline, 4th row



Existing sightline, 15th row



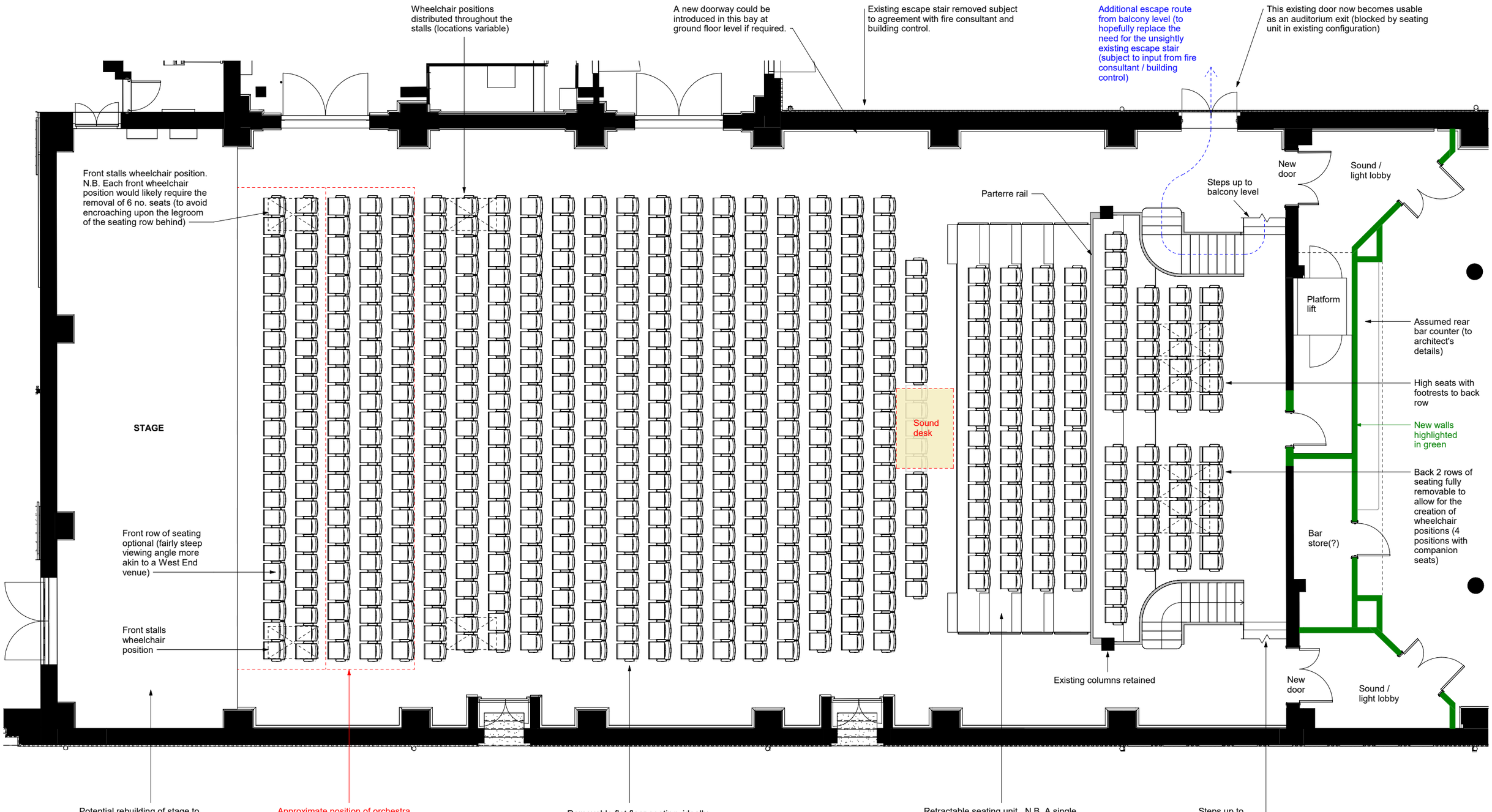
Proposed sightline (re-raked balcony), 4th row



Proposed sightline (re-raked balcony), 15th row. N.B. If wheelchair positions were provided at the rear of the balcony, this would be the view.

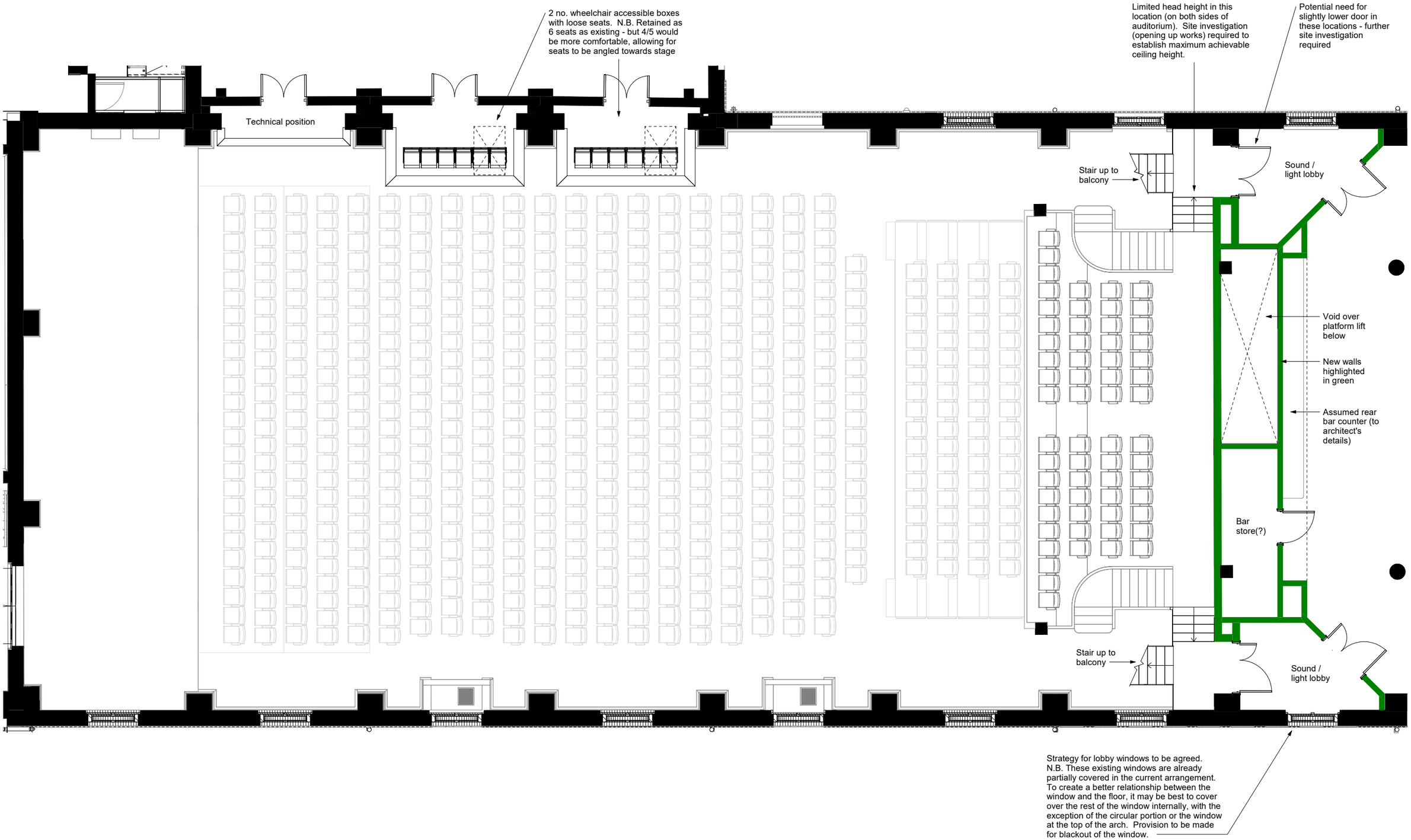
STALLS OPTION C

Ground floor plan



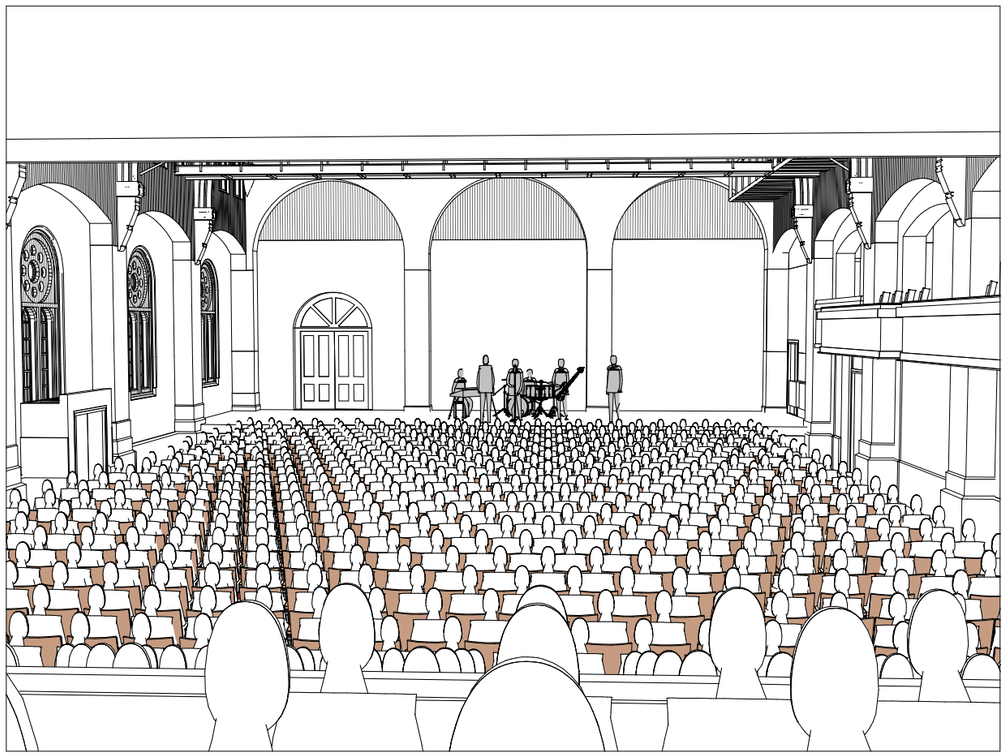
STALLS OPTION C

First floor plan



REAR STALLS SIGHTLINES

Comparison between Option C and Option A

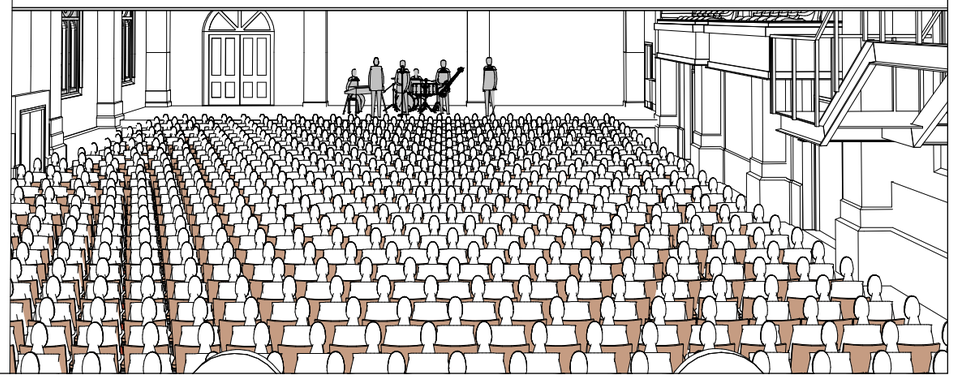


Option C - Sightline from back row of stalls

One of the compromises in Option C is that the rear of the stalls does not tie in with the first floor level, meaning that more space is given over to circulation. This also adds complexity to the evacuation of wheelchairs in the event of an emergency. However, the advantage of setting the back floor level lower is that the sightline from the back row is excellent.

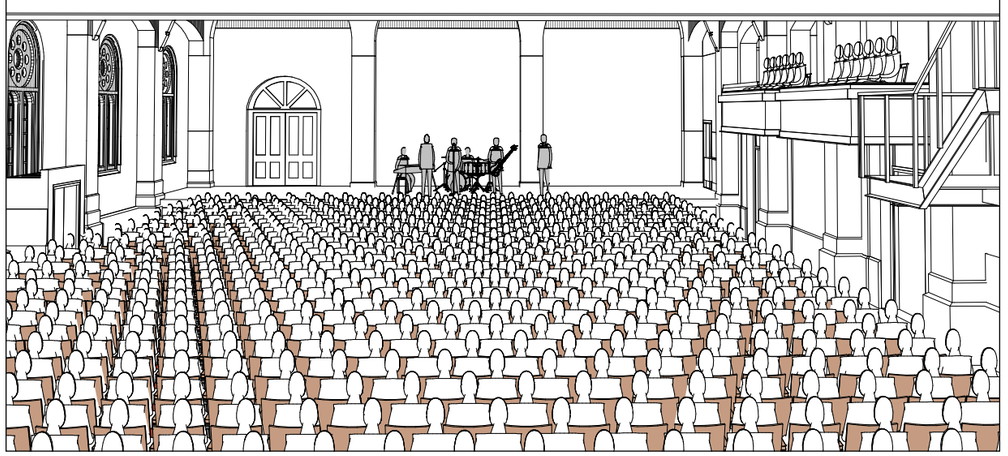
Option A - Sightline from back row of stalls

In Option A, the sightline from the back row is gives a clear view of performers on the stage. The view is, however, quite 'letterboxy' due to the deep overhang of the balcony above. This is one of the compromises associated with the higher seating capacity in Option A. The view below is from the seat immediately next to the control booth, so the control booth wall is in one's peripheral vision from this seat (when the lights are up) but the view is not obstructed.



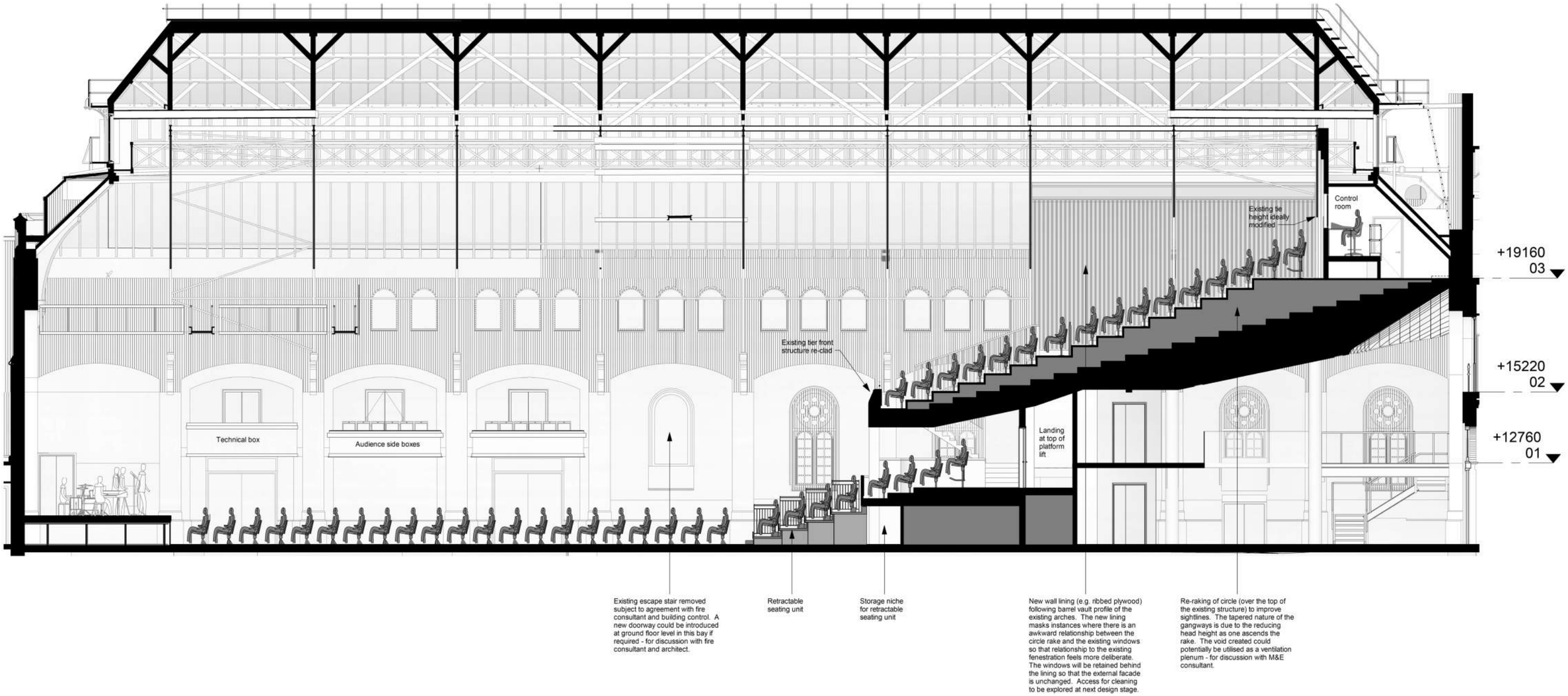
Option A - Sightline from penultimate row of stalls

Whilst the upward sightline is still slightly limited by the balcony above, the view from the penultimate row feels much less 'enclosed' than the view from the back row (and going forward, each row gets better).



STALLS OPTION C (WITH BALCONY RE-RAKING)

Long section



Seating Capacities (without extended stage or orchestra pit)

Stalls capacity (allowing for sound desk)
655 seats (or 619 with 8 wheelchair positions)

Balcony capacity (including boxes)
308 seats (or 304 seats with 2 wheelchair positions)

TOTAL = **963** (or 923 with 10 wheelchair positions)

Standing events (without extended stage or orchestra pit)

Stalls standing capacity *(N.B. This may be slightly reduced by up to approx. 35 people where travelling bands set up their own control booth in the flat floor zone - booth size varies)*
650 (if allowing 0.45m2/person) or 910 (if allowing 0.3m2/person)

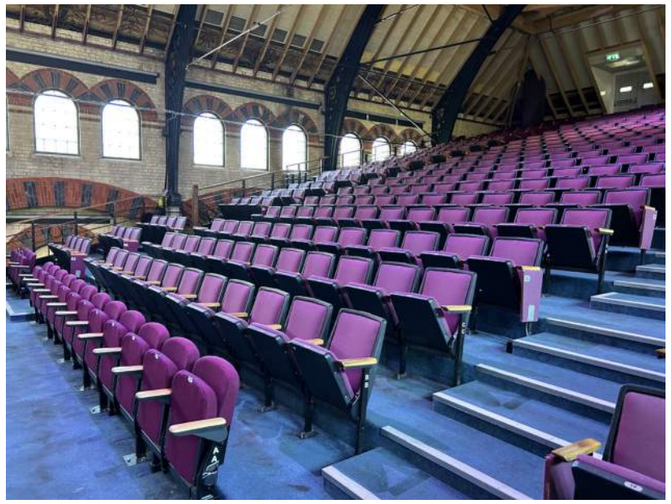
Rear stalls seated capacity
62 seats (or 46 with 4 wheelchair positions)

Balcony capacity (including boxes)
308 seats (or 304 seats with 2 wheelchair positions)

TOTAL (at 0.45m2/person) = **1020 (or 1000 with 6 wheelchair positions)**
TOTAL (at 0.3m2/person) = **1280 (or 1260 with 6 wheelchair positions)**

STALLS OPTION C (WITH BALCONY RE-RAKING)

Perspective section



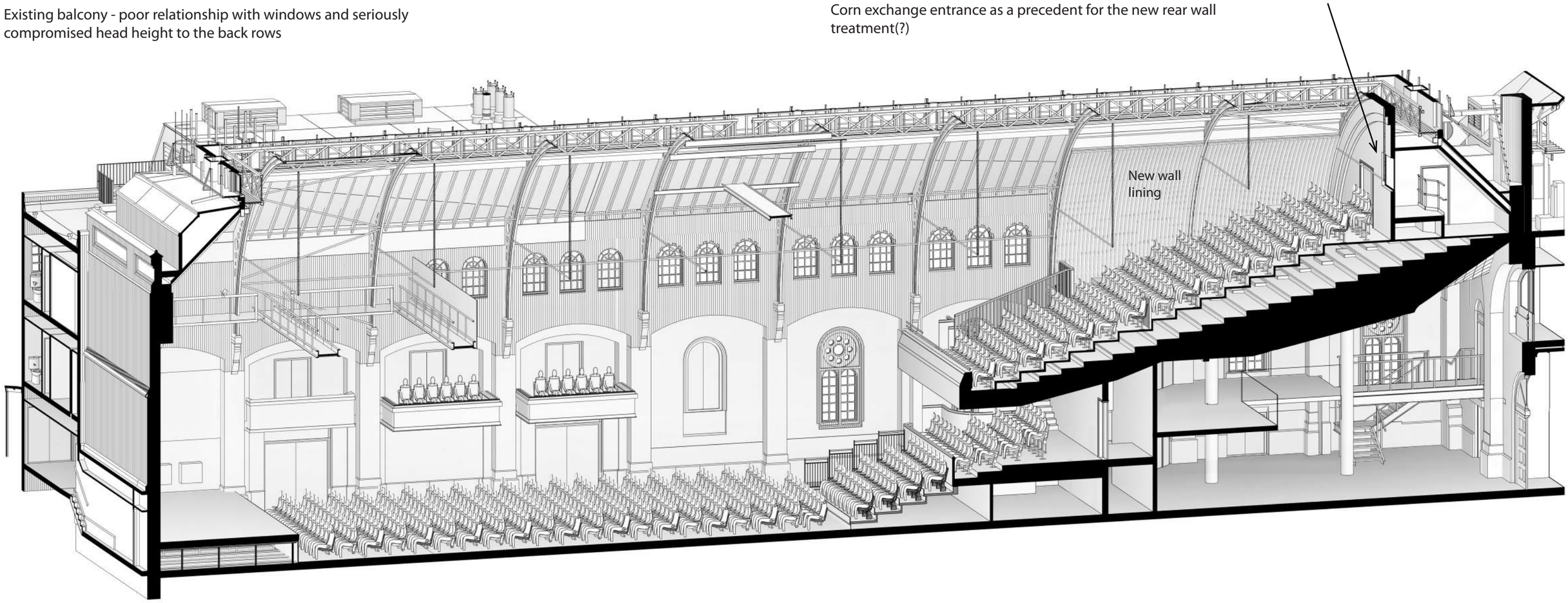
Existing balcony - poor relationship with windows and seriously compromised head height to the back rows

The relationship of the existing balcony to the windows does not really feel 'considered'. One option would be to introduce a new wall lining to the rear bays (following the curved profile of the arches) to mask the awkward junctions with windows. This lining would be internal only - the facade would be unchanged. Only the windows which work with the design are visible from within the auditorium space. The relationship to the windows therefore feels more deliberate and those windows which are visible can be properly celebrated.



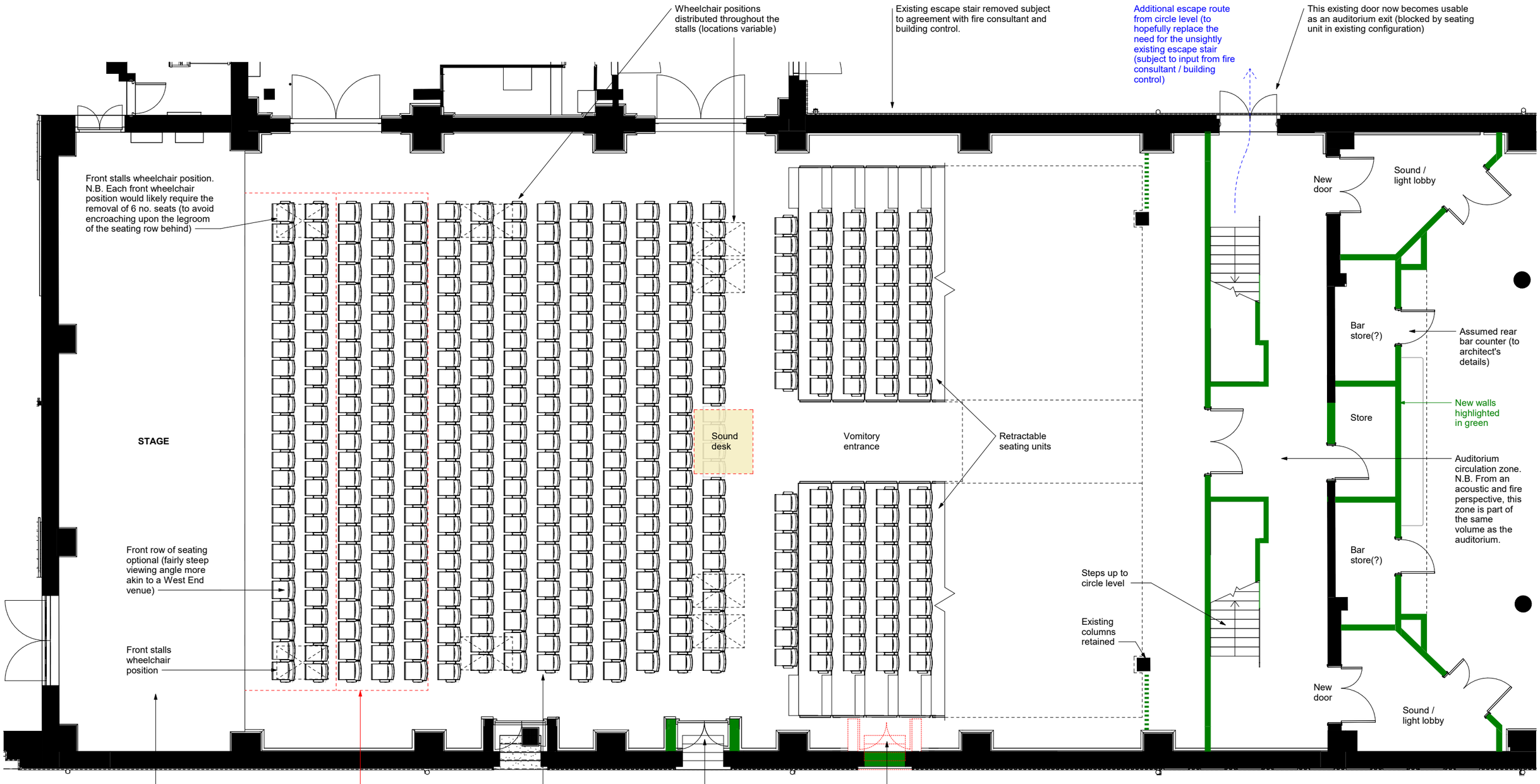
Corn exchange entrance as a precedent for the new rear wall treatment(?)

New rear wall of the auditorium to create space for a control room behind (and to eliminate the restricted height seating rows to the rear). The thinking was that this wall would essentially be a screen following the arch profile (with the spaces behind formed as enclosed boxes). Perhaps the new back wall of the auditorium could draw upon the concentric arches of the main entrance(?). On a practical level, this layered arches idea would be useful in creating more space at the rear for potential wheelchair positions



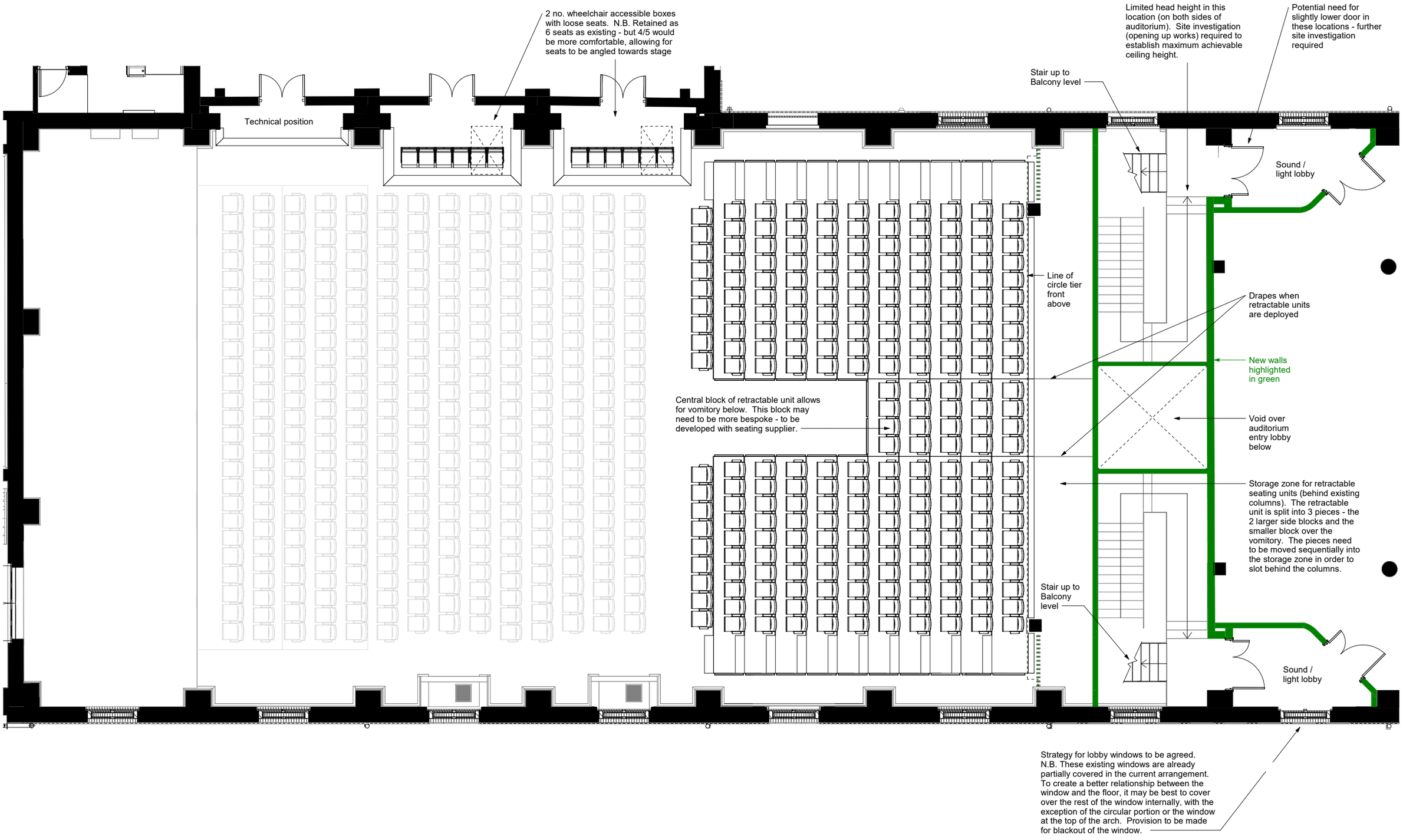
STALLS OPTION D

Ground floor plan



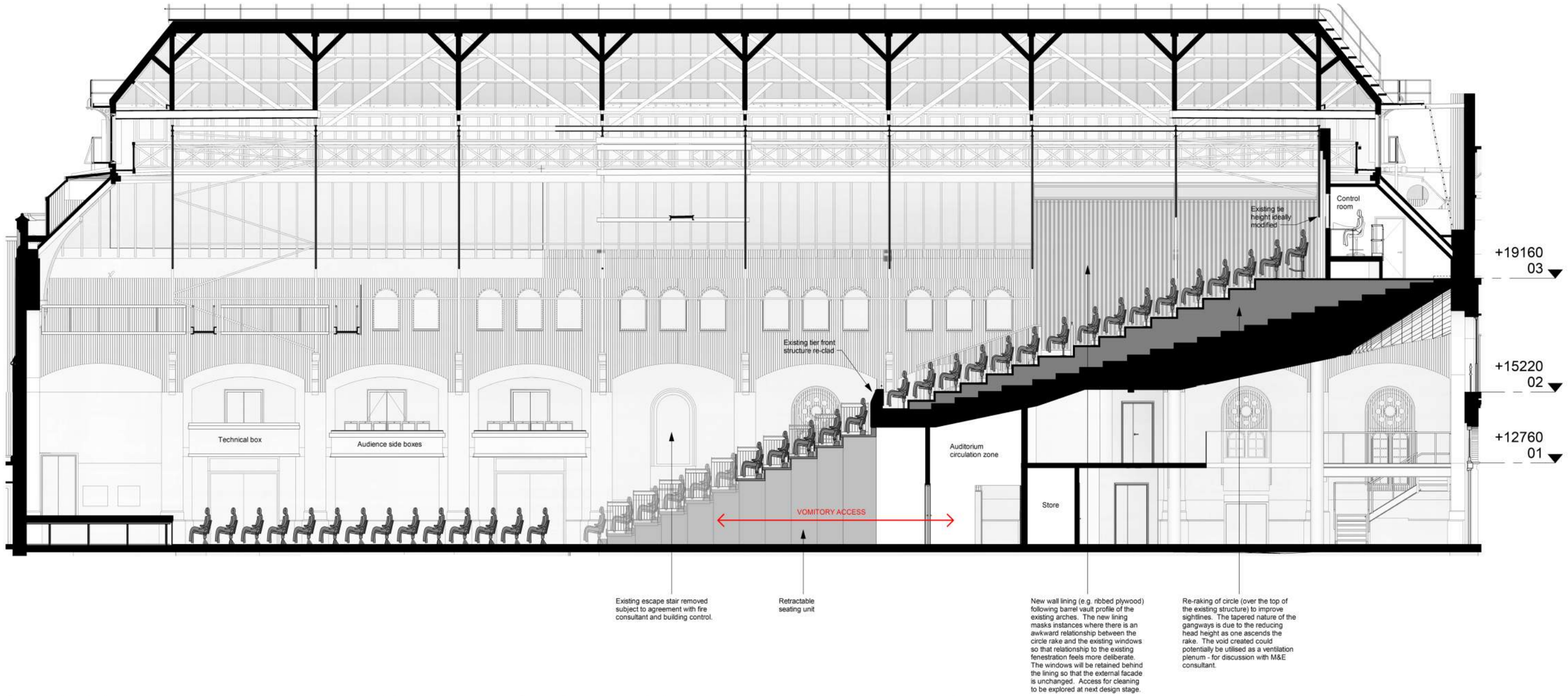
STALLS OPTION D

First floor plan



STALLS OPTION D (WITH BALCONY RE-RAKING)

Long section



Capacities (without extended stage or orchestra pit)

Stalls capacity (allowing for sound desk)
588 seats (or 560 with 8 wheelchair positions)

Balcony capacity (including boxes)
308 seats (or 304 seats with 2 wheelchair positions)

TOTAL = **896** (or 864 with 10 wheelchair positions)

Standing events (without extended stage or orchestra pit)

Stalls standing capacity *(N.B. This may be slightly reduced by up to approx. 35 people where travelling bands set up their own control booth in the flat floor zone - booth size varies)*
660 (if allowing 0.45m2/person) or 940 (if allowing 0.3m2/person)

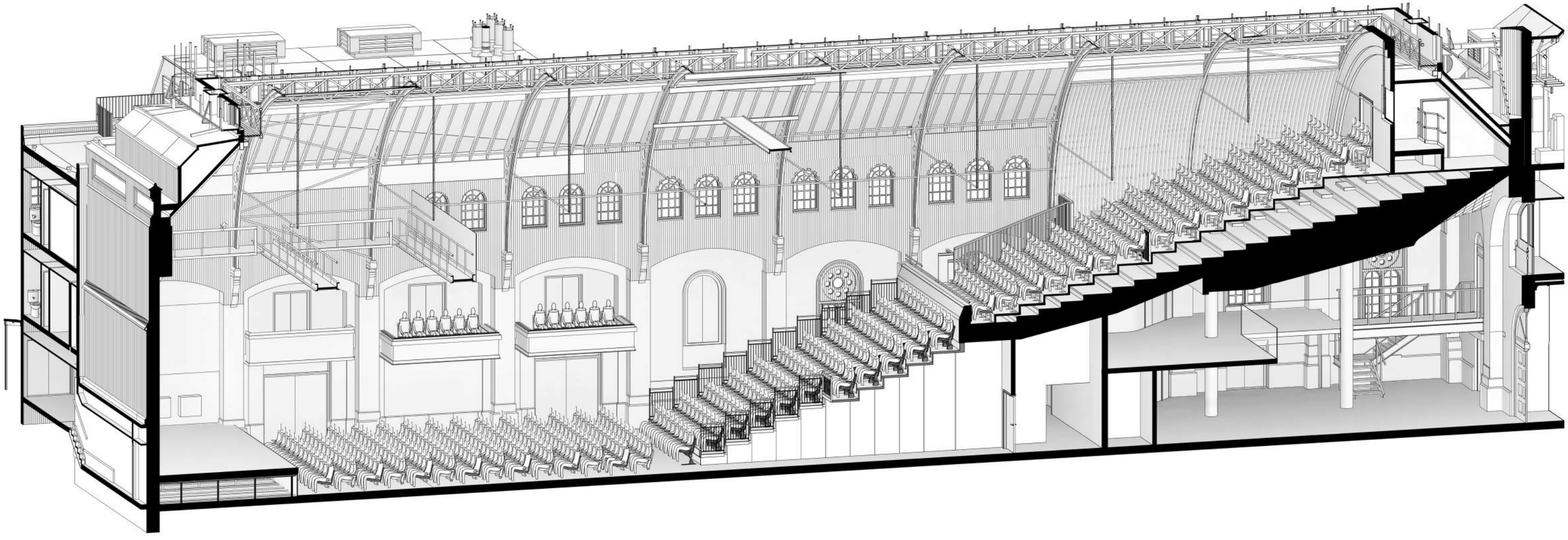
Rear stalls seated capacity
None

Balcony capacity (including boxes)
308 seats (or 304 seats with 2 wheelchair positions)

TOTAL (at 0.45m2/person) = **968 (or 964 with 2 wheelchair positions)**
TOTAL (at 0.3m2/person) = **1248 (or 1244 with 2 wheelchair positions)**

STALLS OPTION D (WITH BALCONY RE-RAKING)

Perspective section



	Seating capacity	Wheelchair positions	Standing zone	Head height issues	Sightlines	Unsightly existing escape stair	Impact on foyer space	Control room
OPTION A1 *Baseline Option - minimal intervention, maximum capacity*	Up to 1294 (see previous pages for assumptions made in this figure). Highest capacity of all the options.	Largest overall capacity therefore requirement for the largest number of wheelchair positions. Creates 2 prime wheelchair positions at the rear of the stalls (with quite good sightlines, albeit a slightly 'letterboxy' view). These can be retained for standing events. Level access through to first floor foyer. The remainder of the stalls wheelchair positions are on the flat floor (as is the case in the existing arrangement). 2 wheelchair positions are retained in the balcony side boxes. Overall slight improvement upon the existing provision.	Largest standing zone of all the options.	Head height issues at the rear of the stalls are designed out (albeit that the ceiling height remains modest at the rear of the salls).	Rear stalls sightlines are good, if a little 'letterboxy' in the very back row. Overall quality of the stalls sightlines is limited by the large proportion of flat floor seats. Without re-raking the Balcony, the sightlines at this level remain poor.	It is assumed that the existing escape stair would need to be retained in this option.	Assumes the re-arrangement of the stalls bars, consolidating the 2 side bars into a single central bar. Creates less additional foyer space at first floor level than the other options, so the foyer floor may need to be extended slightly further to accommodate a central bar counter, or alternatively, 2 smaller bottle bars could be incorporated to the sides of the space.	Control room remains at the rear of the stalls but is pushed further back (and slightly enlarged). The operator's sightline remains relatively poor due to the overhang above. In theory, the control booth would be wheelchair accessible, though the compact size may make this difficult in practice.
OPTION A2 ***N.B. This is the option that forms the basis of the Stage 2 plans.*** *As per Option A1 but with a modified control room arrangement in order to accommodate a recessed rear bar counter in the first floor foyer.*	Up to 1288 (see previous pages for assumptions made in this figure). Second highest capacity of all the options.	As per Option A1	As per Option A1	As per Option A1	As per Option A1	As per Option A1	As per Option A1 at Stalls level. Allows for a recessed rear bar counter at first floor level so that the bar counter zone protrudes around 600mm less into the foyer space compared to Option A1.	As per Option A1 except that the control room is wider (and slightly shallower).
OPTION B *More significant intervention to provide a better audience experience and a better control postion (at the expense of seat count)*	Up to 1065 (see previous pages for assumptions made in this figure)	As per Option A, Option B creates 2 prime wheelchair positions at the rear of the stalls (with quite good sightlines, albeit a slightly 'letterboxy' view). These can be retained for standing events. Level access through to first floor foyer. The remainder of the stalls wheelchair positions are on the flat floor (as is the case in the existing arrangement). 2 wheelchair positions are retained in the balcony side boxes. Overall slight improvement upon the existing provision. *N.B. If lift access to the third floor level proved feasible, multiple wheelchair positions could be provided at the rear of the balcony in this option.*	Standing zone is the same as in Option A - the largest of all the options.	Head height issues at the rear of the stalls are designed out .	Rear stalls sightlines are good, if a little 'letterboxy' at the very back. Overall quality of the stalls sightlines is limited by the large proportion of flat floor seats. The re-raking of the Balcony significantly improves the sightlines at this level.	It is assumed that the existing escape stair would need to be retained in this option since the side stairs serving the balcony do not continue to ground floor level. However, this should be reviewed with the fire consultant since re-raking would reduce the audience capacity at balcony level, potentially allowing for the external escape stair to be removed.	Assumes the re-arrangement of the stalls bars, consolidating the 2 side bars into a single central bar. Creates more additional foyer space at first floor level than Option A, but less than Options C and D.	Relocated to balcony level. This offers a better view for the operator, but the control room would not be wheelchair accessible.
OPTION C *More significant intervention to provide a better audience experience and a better control position (at the expense of seat count). Aim to also make aesthetic improvements with the removal of the unsightly escape stair (subject to approval by the fire consultant).*	Up to 963 (see previous pages for assumptions made in this figure)	Creates 4 prime wheelchair positions at the rear of the stalls (with excellent sightlines). These can be retained for standing events. However, evacuation of the wheelchairs is more challenging in this option since the rear of the stalls is not aligned with first floor level - a managed assisted escape strategy would need to be discussed with the fire consultant / building control. The remainder of the stalls wheelchair positions are on the flat floor (as is the case in the existing arrangement). Overall improvement upon the existing provision. *N.B. If lift access to the third floor level proved feasible, multiple wheelchair positions could be provided at the rear of the balcony in this option.*	Smallest standing zone of all the options.	Head height issues at the rear of the stalls are designed out (although there is a slight pinch point where the steps link the new rear stalls level with the first floor level). Site investigation is required in order to establish the maximum achievable ceiling level here.	Rear stalls sightlines are excellent. The overall quality of the stalls sightlines is limited by the large proportion of flat floor seats. The re-raking of the Balcony significantly improves the sightlines at this level.	The aspiration is to design out the existing escape stair in this option (subject to approval from the fire consultant / building control).	Assumes the re-arrangement of the stalls bars, consolidating the 2 side bars into a single central bar. Creates a good amount of additional foyer space at first floor level.	Relocated to balcony level. This offers a better view for the operator, but the control room would not be wheelchair accessible. A temporary open control position could be created at the rear of the stalls if needed (by removing some seats). This would be wheelchair accessible (though the same challenges apply regarding evacuation of the wheelchair user - see notes on left).
OPTION D *By far the biggest improvement to sightlines of all the options (but also the biggest loss of seats and the highest level of complexity). Improved control position. Aesthetic improvements with the removal of the unsightly escape stair (subject to approval by the fire consultant).*	Up to 896 (see previous pages for assumptions made in this figure). Lowest capacity of all the options.	All of the stalls wheelchair positions are on the flat floor (as is the case in the existing arrangement). No improvement upon the existing provision. *N.B. If lift access to the third floor level proved feasible, multiple wheelchair positions could be provided at the rear of the balcony in this option.*	Standing zone is slightly larger than Option C, but smaller than Options A/B.	Head height issues at the rear of the stalls are designed out as there is no seating beneath the balcony (although there is a slight pinch point over the stairs which go from ground floor level to first floor level within the auditorium volume)	Optimum option in terms of sightlines. The sightlines from the seats on the retractable unit are very good. The proportion of flat floor seating is reduced. The re-raking of the Balcony significantly improves the sightlines at this level.	This option is fully reliant upon the removal of the existing escape stair (subject to approval from the fire consultant / building control). Without the removal of this stair, Option D is not viable.	Assumes the re-arrangement of the stalls bars, consolidating the 2 side bars into a single central bar. However, if the decision is made not to change the existing bar configuration, Option D could still be workable with some slight tweaks. Creates a good amount of additional foyer space at first floor level.	Relocated to balcony level. This offers a better view for the operator, but the control room would not be wheelchair accessible. There is no option for a temporary rear stalls control position.

THEATRE