2024 ASSESSMENT REPORT
HDS315118 HOUSING AND DESIGN 2024

Folio Component

Introduction

It is important that candidates and teachers read through the following information as it provides valuable insight on what to aim for and what to avoid, to achieve successful outcomes for their major folio. Folios submitted in 2024 were varied in quality; however, observations made by the marking team suggest that standards in all criteria had lifted from previous years. Referencing protocols were still inconsistent with many candidates not meeting Harvard referencing protocols and a rather large cohort not referencing images or diagrams within the body of the folio. This is particularly frustrating as it would indicate that previous reports posted on the TASC website have not been viewed by all students and they have not adhered to the folio guidelines closely.

Advice and suggestions included in concurrent 2021, 2022 and 2023 reports may have assisted students to complete a successful folio, but it seems evident that some candidates are still not reviewing these reports.

Summary statements have been made regarding content sections observed by the Marking Team below.

Criterion 6. Locate and analyse information about user needs and influences in design projects

Client's Needs Analysis

Higher achieving candidates would carry out an in-depth discussion of the client's (user's) needs, providing a strong rationale and analysis. From these statements better candidates would draw their aims from it and the Brief statement, as the Brief should really reflect the context of the user's needs. An exemplar was provided within the 2023 report, providing an example of how this important phase could be structured. Some folios provided evidence that students or their teachers had read the report and utilised this structure to good measure. This exemplar is also available with this report.

It is not necessary to follow the exemplar sample as some candidates created a scenario that also discussed in detail the needs of the client and rationalised why these were important. Lesser folios would often just have dot points of recognised needs, but with no justification or analysis provided.

As recommended in previous years, the textbook, *Nelson Visual Communication Design* from Cengage Learning by Kristen Guthrie, gives excellent guidelines for writing brief and aims, context, etc. and could be a helpful class reference book.

The marking panel also recommends that future candidates utilise sub-headings to help break down their discussion into a logical and fluid format.

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The Brief

In ‘A’ responses the brief was a concise statement. Some candidates tended to draw their brief statements out, often a paragraph in length, and this should be avoided.

The Aims

Higher level folios listed aims that were tangible, practical, and had a good degree of sophistication, for example:

- a minimal and contemporary building design which remains aesthetically cohesive with the natural environment
- create a building envelop that incorporates passive design elements to retain a comfortable interior climate year-round.

Many candidates still struggled to identify or correctly communicate aims, particularly with a design emphasis, often listing needs as aims. Lesser folios would list such items as a bed or bathroom for a dwelling, pretty much stating the obvious and not doing some higher-level thinking to attain good aims to work for. Some aims were rather vague, i.e. ‘design for upward of 4 people’. This is not specific enough to determine whether the final design fulfilled the aim. Again, please refer to *Nelson Visual Communication Design*.

Lower level aims examples:

- two vehicle garage with space for a ride on lawn mower
- have a jacuzzi or bath that has access to the views.

Project Context

It appears that more candidates are reading guidelines as the expectations of the Project Context were followed more closely with discussion providing context in relation to their brief and desired project, i.e. when a brief related to emergency housing, the candidate provided data and discussion around the need for more social housing to help reduce homelessness within Australia.

The older “Site Context” formula still featured heavily. This had been addressed in the 2022 folio guidelines and later versions, but still has been utilised, particularly evident when candidates use multiple map images of the site of different resolution/scale.

The addition of information relevant to the client demographic, their stage of life, their needs, or interests and why the development was sited there (such as holiday attractions) were value adding too. Weaker folios still used swathes of maps of different resolutions and scale to explain an area with little else or may have explained something about the site but did not include any on-ground visuals.

Site Analysis

Strong site analyses included a high degree of detail, complimented with a hand drawn, scaled site map (highly recommended by markers) as part of this section. Some candidates also included section drawings or topographic details. Other inclusions were shadow analysis and impacts, vegetation types and their significance, access, seasonal prevailing winds, sun arcs and orientation details, rainfall data and impacts, potential impacts on neighbours or from existing neighbours, existing architectural influences, soil analysis and views. Candidates who had visited the site and taken photos showed greater understanding and were able to communicate and

showcase the features of the site in their folios. Relevant information such as seasonal wind, solstice sun angles and arcs and rainfall was also referenced clearly. High performing candidates were able to analyse the potential impacts of the elements researched above within their proposed design brief.

Good quality interior spatial analyses included a scaled plan of the existing dwelling or area being redeveloped and adjoining areas being impacted along with photos taken by the candidate explaining the current use or issue and where the proposed change will be undertaken.

Poorer quality folios did not include much of the above and often relied on cut and paste diagrams from Google Maps, Sun Calc. and Willy Weather, with little explanation of their relevance. Some students completing an interior spatial analysis failed to show the relationship of the room(s) being renovated or extended to the rest of the house.

Precedent Research

This work was again varied. Higher performing candidates researched and included precedents that had a high level of relevance to their brief. High level folios often contained one or several case studies analysing key design features that could be utilised within their design response. Candidates who carried out an in-depth discussion, stating the relevance, how the idea could be utilised including what changes may need to be made generally scored well. Also, candidates who went with multiple possibilities that could be used to fulfil an aim may also have scored well. Some better candidates also categorised their precedents, relating to key aims, i.e. architectural styles, interior solutions and so on. The strongest folios used case studies precedents, analysing and evaluating features that were relevant to their aims and brief and evaluation of what adjustments may need to be made. The candidates displayed a high degree of understanding of the relevance of the precedent to the aim and brief.

Weaker folios often had examples that may have had relevance to the brief or aims, but very little justification or analysis was carried out. Weaker candidates still tended to create a “product catalogue”, or “technical manual”, these precedents having little impact on design decisions. The Marking panel strongly recommend that future candidates look to research and gather multiple design precedents that lend themselves to at least one case study being carried out as part of their precedent work. Markers also observed some candidates not submitting 3 pages of precedent work as required by the folio guidelines, this often impacting on their final assessment of this criterion.

Referencing

Consistency in referencing protocols remains an issue. Several candidates did not reference their images, either with a numeral figure or footnote under the image but did list them in their bibliography – this would have drawn a marking penalty. This does make it difficult for Markers to link an image to the source listed within the bibliography. There does seem to be a trend where candidates are numbering their images, but these numbers are not listed within the bibliography, again making it difficult for markers to link the image to the appropriate reference. Generally, bibliographies were well constructed this year – closely conforming to the Harvard referencing system. This may reflect candidates using citation software that is now readily available online.

Some academic integrity issues were reported this year, particularly in regard to the use of house plans or elevations seemingly lacking authenticity. The Marking Panel strongly recommends that teachers read through final drafts prior to submission to TASC and consider submitting versions to

Turnitin or AI checker prior to uploading too, to avoid academic integrity issues occurring or marking penalties being applied. Most of the work submitted should be observed to be done in class as set out by TASC guidelines.

There is an increase in the number of candidates using software to produce final drawings and some concept work. Many candidates did reference the software used but rarely the “assets” they used.

Students can check their work for plagiarism issues by submitting their drafts into software such as Turnitin themselves. All candidates should make themselves very familiar with the TASC Authenticity and Academic Integrity: A Guide document to mitigate poor referencing and adhere to appropriate protocols.

Criterion 7. Use and document the design process

Design Development

A and B students showed clear design development using accurate drawings that comply with architectural conventions, including appropriate scale bars or dimensions. In-depth discussion outlining and justifying the changes being made and considerations for the next iteration were also evident. Their plan drawings were often supplemented with elevation and section drawings or 3D artistic impressions with relevant annotation.

A good number of candidates included “visual brainstorming” sketches that were annotated clearly and supported by dialogue explaining their design thinking – these were well regarded by the Markers. Some candidates did provide bubble diagrams but did not support them with any written communication explaining their design thinking. It is important that candidates do not rely on this genre of visual work alone but use it to help inform their scaled concept drawings.

Stronger candidates also regularly reflected back to their aims in their discussion. Some candidates listed the aims that were helpful, but did not always go into in-depth discussion on how that were being addressed in their annotations.

Lower scoring folios did not always include key furnishings in their concept work, thus not providing strong evidence that they had checked that room proportions were workable, and that circulation and flow had been considered.

Design development drawings need to be clearly presented and be large enough to be legible. Scale, scale bars, dimensioning and an indication of the north location are also a critical part of the design process. These elements were absent in some folios this year, drawing a significant marking penalty. There needs to be consistent use of scale throughout the formal concept stage and into the final drawings.

Some design concepts were basically the same from concept 1 through 3 with very little design progression and minimal discussion. Design analysis for a number of candidates was very superficial providing an explanation of what was included but no justification and clarification of the design evolution.

Some designs had negative aspects highlighted in concept 1 but continued to include these in other concepts and in many cases also featured in the final design even though the feature had been identified as a negative. This was often closely linked to some candidates creating concepts

with intentional “faults” in their design work that are "set to fail", such as "there are no windows in the design, this will have to be addressed in the next design" or "a toilet could only be accessed externally”. This would often suggest that the candidate had undertaken “Reverse Design” – where they came up with one concept and then tried to de-construct it to form lesser iterations of it. Also, some initial concepts would not be addressing certain desired aims at all, and while recognised, should not have occurred in the first instant. This is not an appropriate design practice.

Overall presentation still needs consideration. Weaker projects had quite small drawings with minimal detail that were difficult to interpret clearly. The marking panel recommends one A3 page per concept/iteration. Stronger projects included hand drawn images that were accurately presented and contained appropriate supporting annotations. Some candidates did choose to use CAD in this phase too, and these were generally easy to visualise and assess. It is important that hand drawings are done with appropriate weighted pencils so that scanned copies are clearly legible. Digital annotations do allow for easier reading and more ordered discussion of design details. Even in stronger folios, candidates often had drawings scaled too small, making the text the main content on the page rather than the visual design work.

The marking panel does recommend that candidates undertake much of their initial design iteration by hand and if they desire, use CAD software for the final set of drawings as expected within the folio guidelines. A further tip is if showing multiple floors, ensure they are shown on the same page, so markers can clearly see how they are linked. Existing precedents do exist online to demonstrate this convention.

Criterion 8. Generate design solutions which respond positively to the brief and identified aims

Design Resolution

Strong folios clearly showed a resolution to their design problem. High scoring candidates created well refined drawings, to scale (with scale evidence included i.e. a scale bar), dimensions and the direction of North. They provided in-depth narratives discussing the design features presented within each drawing such as floor plans, elevations, section drawings and 3D drawings. These narratives also linked the design features with the brief and aims of the project.

Strong folios provided an evaluation that discussed and rationalised how each aim was achieved. All aims originally listed should have been addressed in a comprehensive manner.

Like previous years, some candidates claimed that a “particular” aim was addressed, within the written evaluation, but there was no evidence of this occurring throughout their concept work or within their final section of realisation drawings and annotation. Students need to justify throughout their folio how they are addressing their aims as well as justifying them in their final evaluation.

Some lower scoring candidates did supply a set of drawings as prescribed in the folio guideline, but not always well detailed and with little discussion or no narrative at all explaining the design features.

As indicated earlier, some candidates that listed simple, unsophisticated aims restricted their opportunity to attain high outcomes in their folio assessment.

Drawing quality and annotations of the final floor plan still need improvement in Criterion 8 as conventions were not always met, such as wall thickness and furniture inclusions, all drawn to Australian Standards, whether drawn by hand or produced by CAD.

The inclusion of mood boards and colour schemes are not relevant, unless one of the aims is associated with the element of design “colour” and a mood or design genre they are trying to achieve. Some of this information can be provided within precedent research, but best to avoid catalogue style precedent work. The inclusion of schematic plans showing light fixtures and/or electrical outlets are not relevant with the exception of universal or accessible design folios, with a particular reference to switch heights or demonstration of transition and flow paths.

As set out by the guidelines, for a greenspace design, the C8 section should provide at the minimum a final floor plan, two elevations, one section drawing and a site plan with appropriate supporting annotations, scale indicators and dimensioning. Internal based projects need to provide at least two section drawings and two to three pictorial drawings again with annotations and scale/dimensioning details. Several candidates did not meet these guidelines and would have been penalised. The marking panel also recommends positioning the final site plan as the first drawing in order for this section.

Finally, a relatively large minority of candidates have been utilising online generated software such as Coohom, Floor Planner, etc., that requires very little work on behalf of the user and does not lend to developing robust design thinking skills and drawings, such as required in the exam. Utilising Sketchup, Revit, AutoCAD are acceptable, but students do need a high level of competency to utilise these well, and poor use can lead to poor outcomes.

General advice for future students

Pencil Scans and spell check

Please ensure hand drawn drawings are drawn with a sharp HB or HB pacer and scanned to 300 DPI, ensuring the linework is clearly visible. Undertake a spell check too. When scanning, please ensure scale bar is also present in the image.

Folio Publishing

Students should seek guidance and instruction from teachers in using design elements and principles in the publishing of their folios. PowerPoint is a reasonable Publishing Software, but pages using design templates take up too much available space, so just use blank pages. Adobe InDesign is another recommended publishing software. It is also important for candidates to adhere to the folio guidelines and stay within the 20-page limit. A content page is not necessary. Please avoid using white or light-coloured text on black backgrounds. The Marking panel strongly recommends that students keep their publishing simple – use black text on white background. Also – many students used up valuable page space by only having one paragraph or one image/drawing on one page. Students should look to use their page space effectively and avoid over-crowding and replication of written dialogue just to fill the space.

The Use of CAD in Folios

The inclusion of CAD has the potential to positively impact student’s time management and development of architectural discourse and skills, as well as benefits such as greater efficiency, more precise drawings, and the ability to easily edit designs. Additionally, the use of CAD can

resolve difficulties that often occur in the design of complex forms. However, the current course syllabus does not prescribe CAD as a teaching and learning component of this course, and the already rich content of the course would certainly inhibit time required for teachers to provide instruction to students on how to use an architectural design software competently. However, some teachers may be very comfortable in providing some exposure to this software. Students who have studied CAD can use this skill set to their advantage and would not be penalised. Obviously, on the other hand, those who are visually strong, artistic or are a natural draftsman are certainly advantaged too.

Essentially, the quality of student work, whether it be created using CAD or by hand should be marked on its merits, not necessarily effort. As to whether students choose to use CAD or to draw by hand, (these are just the tools) the crucial factors are scale, proportion, appropriate conventions along with appropriate annotations and narrations of the design. These should all be used to a good standard. The marking panel strongly recommends that future candidates utilise hand drafted drawings and sketches for their earlier design work – particularly in the C7 section.

As mentioned earlier, over the last few years, the marking panel has seen an increase in candidates utilising “off the rack” software such as Floor planner, Roomsketcher, Coohom or similar software. These require very little calculation of scale and proportion by the user and do not allow the candidate to develop a solid understanding of spatial design. Furthermore, many candidates using this software did not reference any assets used within these presentations. The marking panel strongly recommends that future candidates do not use such software as its use detracts from the content of their folio and does not provide a true indication of the work undertaken. Many folios using this software would not have scored that well in Criterion 7 and Criterion 8.

It is important that traditional drawing techniques be developed by the student.

There is a connection between a student’s ability to draw by hand and their ability to design. A sketch demonstrates a process of thinking, analysing, and evaluating, that often gets lost in CAD work. This calls for the need to develop foundational skills, and practice the design process, so complacency does not creep into the design development of creative thinkers. By including traditional methods in the design process, students can express their ideas creatively and authentically. This is a critical skill for all students to possess for their end of year exams if they are to succeed to a high standard. The Marking Panel strongly recommends considered use of hand drawing in the design iteration phase regardless of a candidate’s competency in using CAD software and final presentation drawings should also be drawn by hand if the candidate is not a competent user of a recognised drafting software.

Teacher recommendations

Teachers have an obligation to give their students the best possible chance to be successful in any subject that they teach. Since the TASC Housing and Design web page is publicly available, students are allowed to access (and indeed, should be encouraged to access) this material. They should be made aware of the last tab on the Housing and Design page: **Supporting documents including external assessment material**. This will give students clear information in what they need to include and how to avoid mistakes with their folio, as well as giving them an insight as to what exactly it is that the external markers are looking for. It is also important to consider TASC’s guidelines that states that the majority of work submitted by students should be observed to be done in class.

Written Component

The 2024 exam did present challenges to candidates. The content examined was relevant to their learning; however, many candidates struggled to provide sufficiently detailed responses in the allocated time. Throughout the assessment process, Markers were looking for evidence of understanding and on how each of the key criterion elements were applied in the context of each question and how well the aims and brief of the question were satisfied.

Section A

Question 1: Cool Temperate Design

This question was attempted by 172 candidates.

Question 1 required students to design a home situated near Hobart utilising three transportable building modules. Module 1 comprised an open plan kitchen, dining and living spaces, whilst module 2 was made up of 2 bedrooms and a bathroom. Modules 1 and 2 were both 12,000mm x 4800mm with a raked internal ceiling falling from 3,000mm to 2,400mm on the short elevation.

A smaller third module was intended to be utilised as a means of connecting modules 1 and 2 together. The students could employ this third module however they thought best. The height of the joining module could be up to 6 metres which led a few students to consider the 2 larger modules being built over two levels.

The students were asked to consider the design and layout of the modules on a site situated in the cool temperate climate zone to promote passive heating to one of the bedrooms and the living spaces only. The home needed to include an outside deck area of 16 metres square. The question indicated that the pre-built modules were lightweight and well insulated and constructed using vertical timber cladding with a plywood interior lining.

A site plan was shown on the question sheet showing a rectangular block 20,000mm on the north/south sides and 30,000mm on the east/west sides with the building area slightly skewed towards the NNE. Road access was to the west with the magnificent views to the south. The plan also showed prevailing north westerly winds. The site plan was not shown on the A3 answer sheet.

In their responses students were instructed to draw a design layout of the 3 modules and elevation at 1:100 to illustrate how the home could utilise passive solar techniques to achieve thermal comfort. Students needed to indicate the location and orientation of the modules on the site to best achieve solar gain and shading. They also needed to indicate the location of all openings and show the size and placement of eaves on the floor plan. All drawings needed to be annotated to justify the design decisions made.

The students may have benefited from having an answer sheet that indicated the potential build area which could have prevented some from overextending the building outside of the build zones.

The most successful responses, in the A to B range, considered appropriate orientation with the longer sides of the build facing north allowing the solar access into the bedroom and living area. These students also considered offsetting the two main modules to allow for the south views from the living areas. These candidates also correctly indicated on the drawings the winter and summer sun angles for Hobart and the effect that would have on providing adequate shading using

methods that involved the incorporation of eaves, but also included other strategies including flora of deciduous type to shade the north and north west area during summer and allow winter sun to access the building when the sun angles are lower.

Orientation was also important in ensuring the house could take advantage of the prevailing north westerly breezes to assist in cooling the home on those occasions when the site experienced warmer conditions. Stronger responses were able to produce a design which balanced orientation of the modules to best utilise most solar access, while maximising access to the north westerly breezes for ventilation and the southern views.

A very small number of candidates decided to use split levels between the modules to allow for the southerly views and for solar access into the bedroom and living areas. Some students listed discrete insulation ratings for different zones such as under floor, ceiling and wall, not taking into account that the modules were utilising Structured Insulated Panels (SIP) style construction. Some also misunderstood modulisation and included concrete flooring for thermal mass, which would have been impractical for this scenario.

Question 2: Hot Humid Design

This question was attempted by 92 candidates.

Question 2 required students to design a home situated in Darwin utilising three transportable building modules. Module 1 comprised an open plan kitchen, dining and living spaces, whilst module 2 was made up of 2 bedrooms and a bathroom. Modules 1 and 2 were both 12,000mm x 4,800mm with a raked internal ceiling falling from 3,000mm to 2,400mm on the short elevation.

The smaller third module was intended to be utilised as a means of connecting modules 1 and 2 together. The students could select from four alternate shapes for the connecting module, all 3,600mm in width but varying in area. The height of the joining module could be up to 6 metres which led a few students to consider the 2 larger modules being built over two levels.

The students were asked to consider the design and layout of the modules on a site situated in the hot humid climate zone of Darwin to promote passive cooling to specific areas of the home. The home needed to include an outside deck area of unspecified size. The question indicated that the pre-built modules were lightweight and well insulated (although this phrasing caused confusion for some students) and constructed using vertical timber cladding with a plywood interior lining.

A site plan was shown on the question sheet showing a rectangular block 20,000mm on the north/south sides and 35,000mm on the east/west sides. Road access and views were to the north.

In their responses, students were instructed to draw a floor plan and elevation at 1:100 to illustrate how the home could utilise passive solar techniques to achieve thermal comfort. Students needed to indicate the location and orientation of the modules on the site. They also needed to indicate the location of all openings and show the size and placement of eaves on the floor plan. All drawings needed to be annotated to justify the design decisions made.

The students may have benefited from having an answer sheet that indicated the potential build area which could have prevented some from overextending the building into the easement zones and in some cases into the neighbouring blocks on the eastern and western sides.

The most successful responses, in the A to B range, considered appropriate orientation with the shorter sides of the build facing east and west to avoid low angle sun. These candidates also correctly indicated on the drawings the winter and summer sun angles for Darwin and the effect that would have on providing adequate shading using methods that involved the incorporation of eaves, but also included other strategies including shade screens/sails, awnings and shutters.

Orientation was also important in ensuring the house could take advantage of the prevailing south easterly breezes to assist in cooling the home. Stronger responses were able to produce a design which balanced, orientation of the modules to minimise solar access, while maximising access to the south easterly breezes for ventilation and the northern views.

Other elements found in the stronger responses also considered the following:

- Elevating the building off the ground to allow air flow under and up into the building with venting and also allowing warm air to be drawn out the building through the ceiling/roof or high-level windows.
- Designing the layout, placement and size (Venturi Effect) of doors and windows to accentuate cross ventilation through the home.
- Utilising louvred and/or casement style windows and easily openable doors that allow breezes to move through the building.
- The use of landscaping to provide shading and funnel breezes into and through the home.

Although the question already specified that the modules were ‘lightweight and well insulated’, stronger candidates also discussed the use of reflective foil insulation. The use of the term ‘well insulated' confused some of the weaker candidates who mention using bulk insulation.

The question specified the interior and exterior cladding materials as timber; however, stronger candidates reinforced this and additionally mentioned the use of thin corrugated metal, aluminium framing and painting the exterior in light colours to reflect heat. Other features considered by stronger candidates included the use of shade sails over the deck area and water features such as ponds on the south-eastern side that could take advantage of the cooling south easterly breezes.

Students in the C range considered some of the above considerations, including annotations that demonstrated some technical and conceptual understanding of the principles of passive cooling but with poor or unfinished drawings. These students often struggled to effectively apply their passive design knowledge evident in their annotations to their design solutions. Others had well thought out drawings that were not supported well by comments justifying their design decisions.

The lower achieving (t range) students demonstrate limited understanding of designing for tropical regions and often included the following aspects in their responses:

- a building, whose orientation and dimensions would not allow it to fit on the site
- poor orientation with long sides east/west (unable to capture the south easterly breeze)
- inadequate shading
- no inclusion of the deck and no utilisation of the joining module as a transition zone
- included double and sometimes triple glazed windows and bulk insulation
- no elevation drawing or drawings that did not indicate how eaves were incorporated
- discussed utilising thermal mass.

This was a challenging question that asked quite a lot of the candidates in the one hour recommended. Very few students were able to attain high results within the allotted time, partially due to the nature and complexity of the question including all the requirements requested in the response.

Section B

Question 3: Functional Use of Space

Question 3 required students to redesign a 9 x 9 m² workshop into a dual-purpose space, integrating a physiotherapy business and a residence. The task included:

- Separate functional areas for the business and residence.
- Key business spaces, such as a reception area, client waiting area, and a 9 m² physiotherapy consultation room.
- Residential elements, including a sleeping area, kitchen space, living and dining areas, and a bathroom with a combined laundry.
- Adaptations to the existing structure, including alternative openings to replace the roller doors, provision for up to four 800 x 800 mm awning windows, and efficient use of natural light and ventilation.

Students were required to produce a detailed floor plan at a scale of 1:50, along with any additional drawings or diagrams. These needed to be supported by annotations to justify design decisions, demonstrating how their solutions met the requirements of the brief. The focus was on creating a functional and cohesive design that balanced professional and residential needs while adhering to spatial constraints.

Positive Aspects

Stronger responses demonstrated clear planning, innovative design solutions, and adherence to functional design principles.

Several students excelled in the following areas:

- Clear Separation of Spaces: Stronger responses displayed a clear division between the business and residential areas, with distinct entry points at the front of the building utilising the previous roller door openings.
- Single-Level Design: Many candidates successfully limited their designs to a single level, adhering to height restrictions and simplifying the layout.
- Effective Zoning: Open plan designs for the kitchen, dining, and living areas were well integrated, with private zones effectively allocated for the bedroom. Additional access points between the business and residence improved circulation for Joni and Stefan.
- Innovative Use of Roller Doors: Clever adaptations, such as incorporating both windows and doors into the roller door openings, were evident in stronger responses.
- Proportional Space Allocation: The allocation of approximately one-third of the area for the business and two-thirds for the residence demonstrated thoughtful planning.
- Creative Joinery Solutions: Innovative and functional storage or joinery designs enhanced usability and aesthetic appeal.
- Window Placement: Strong responses carefully positioned windows to distribute natural light evenly throughout the design, with thoughtful sacrifices in non-critical spaces when required.

Areas to Improve

Weaker responses revealed misunderstandings of spatial dynamics, design constraints and task requirements. Some key issues included:

- Misunderstanding Space Allowances: Several students failed to consider adequate space for moving furniture, resulting in impractical layouts. For instance, dining tables and chairs lacked sufficient clearance for foot traffic and seating usage.
- Incorrect Window and Door Additions: Poor placement and sizing of windows and doors, particularly additional windows, led to inadequate natural lighting and ventilation.
- Poor Use of Hallways: Inefficient hallway designs wasted space or disrupted circulation.
- Lack of Privacy Zoning: Some responses combined the business and residential spaces without clear separation, compromising both privacy and functionality.
- Split-Level Designs: Misinterpretations of height restrictions led to unrealistic or impractical split-level layouts.
- Unnecessary Inclusions: The inclusion of non-essential elements, such as electrical plans, detracted from the task's focus.
- Misunderstanding Natural Light: Some students failed to utilise natural light effectively, while others misunderstood window dimensions and placements, which impacted lighting and ventilation.

Recommendations for Improvement

- Design Literacy: Students should strengthen their understanding of spatial planning, including appropriate allowances for circulation and furniture movement.
- Clarity on Task Requirements: Reinforce the importance of reading and adhering to question briefs, particularly regarding height restrictions and the inclusion of specified elements.
- Focus on Core Elements: Avoid unnecessary additions, such as electrical plans, unless explicitly required.
- Zoning Principles: Emphasise the importance of functional zoning to maintain privacy and usability between mixed-use spaces.
- Natural Light Utilisation: Encourage detailed study and application of window sizing and placement to maximise natural light and ventilation.

Question 4: Accessible Design

This question asked students to provide design solutions for the conversion of a garage-type building to a home suitable for one person with universal access design a necessary requirement. The building included a pre-positioned workshop area which was not to be altered. Views from the living space into the workshop were required, in addition to the usual functional use of space and natural light considerations. An unscaled perspective drawing and a plan view with major dimensions were provided. Orientation of the building envelope was not given.

The response required was a plan view at 1:50 showing the details of the proposed building modifications including doors and windows and at least one section view as deemed relevant.

Responses in the A and B range divided the available living space into three distinct zones to match the three 'rectangles' available, i.e. kitchen, living and dining (KLD), sleeping and bathroom/toilet, with the sleeping zone placed within easy access to the bathroom. Strong

responses also utilised partial walls and creative ways of delineating the space without necessarily slicing an already compact space into three (or more) separate rooms.

Also present were detailed and correct placement of the toilet (with adequate transfer space), shower and associated grab rails and other accessories. ‘Turning circles’ were also correctly placed in plan view. Appropriate placement of windows for workshop viewing and natural light, and clearly showing modifications to the existing roller door entry were all also attended to.

At this level, clearly drawn section views of critical Universal Access (UA) areas such as the bathroom and food preparation areas were also provided, showing features such as bench height, knee clearance, UA storage options and other suitable fixtures and fittings. Annotations were detailed and relevant, specifying such details as low-friction floor coverings, light switch height, detachable shower heads and door types and widths.

Responses in the C- to C+ range provided varying degrees of the above, but often lacked or had incorrectly provided UA features, particularly in the bathroom. The use of space and placement of windows was also not well resolved at this level, with common problems being access to bathroom only via bedroom, or long distances between sleeping area and toilet. Unnecessarily dividing the already small space with whole walls and adding a ‘hallway’ were also often present. Annotations were less thorough, often referencing irrelevant Passive Solar Design (PSD) notes, indicating unfamiliarity with the exam paper format. Walls incorrectly drawn as a single line in plan view were not uncommon. Section views at this standard were largely present, but often scaled inaccurately and showing only basic UA features.

Responses marked at t+ or lower were usually substantially incomplete or completed but lacking essentials such as a bed or designated sleeping area. Scaling in plan view was often incorrect or inconsistent throughout. Section views at this level were often absent or unscaled sketches with no accompanying annotations. Some candidates misread the question and redesigned the whole space, including moving the provided workshop area. A small number of t-graded papers showed good drawing and knowledge but were largely incomplete, perhaps demonstrating that the candidate had run out of time after completing section A.

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