

Glenlivet Public Hall
Improvement Options Report

Alan Jones Associates
November 2024

1 EXECUTIVE SUMMARY & RECOMMENDATIONS 3
2 INTRODUCTION & BACKGROUND 5
2.1 Glenlivet Hall 5
2.2 Glenlivet Hall Committee 5
2.3 Tomintoul & Glenlivet Development Trust 5
3 MARKET ASSESSMENT – LOCAL AREA ASSESSMENT 6
3.1 Glenlivet Community Overview 6
3.2 Rural Deprivation 6
3.3 SIMD Assessment 7
4 MARKET ASSESSMENT – TOURISM & HERITAGE 7
4.1 VisitScotland – Key Tourism Trends 7
4.2 Tourism in Moray 8
4.3 The Speyside Way 8
4.4 Scotland Outlook 2030 – Scotland's Future Tourism Strategy 9
5 COMMUNITY ENGAGEMENT & SUPPORT 9
5.1 Hall Survey – 2022 9
5.2 School Engagement 12
5.3 Community Engagement Event – October 2024 12
5.4 Further Evidence of Support 13
6 COMMUNITY BENEFIT ASSESSMENT 13
7 COMPARABLE EXAMPLES 15
8 PRIORITY 1: EXISTING HALL INSULATION 16
8.1 Overview & Context 16
8.2 Consideration of Options 16
8.3 Capital Costs 18
9 PRIORITY 2: IMPROVED ENERGY & HEATING SYSTEMS 19
9.1 Overview & Context 19
9.2 Solar Panels 19
9.3 Comparison of Heating Options 19
9.4 Capital Costs & Revenue Considerations 20
10 PRIORITY 3: CARAVAN PITCHES AND CAR & BIKE CHARGING STATIONS 20
10.1 Overview & Context 20
10.2 Examples / Design Work 23
10.3 Capital Costs 23
11 PRIORITY 4: EXTENDED & ENHANCED KITCHEN 24
11.1 Overview & Context 24
11.2 Options / Design Work 24
11.3 Capital Costs 26
12 PRIORITY 5: IMPROVEMENTS TO THE OUTDOOR PLAY 26
12.1 Overview & Context 26
12.2 Options / Design Work 27
12.3 Capital Costs 28
13 PRIORITY 6 HALL EXTENSION 28
13.1 Overview & Context 28
13.2 Options / Design Work 29
13.3 Capital Costs 32
14 SUMMARY OF CAPITAL COSTS 33
15 POTENTIAL SOURCES OF FUNDING 35
16 RECOMMENDATIONS 37
17 APPENDICES 38
17.1 Appendix One: Letters of Support 38
17.2 Appendix Two: Comparative Assessment of Insulation Types 41
17.3 Appendix Three: Heating Systems 44

1 Executive Summary & Recommendations

Alan Jones Associates has been commissioned to undertake a study into key improvements for Glenlivet Public Hall. The Hall Committee identified the main priorities for investigation as listed below.

1. Improved insulation for the existing Hall and investigate options for new energy / heating systems for the building.
2. Improvements and realignment of the outside space – to provide for campervans and visitors – hook up points, EV charging, BBQ space, and access to the Hall's toilets and showers.
3. Internal expansion and improvements to the kitchen.
4. Consider options for new Outdoor play
5. Prepare options for an extension to the Hall to provide more appropriate sizes multifunctional spaces.

The following key considerations are noted under each of these, with this report investigating the level of support, feasibility, and financial considerations of each, as well as the potential energy savings and options.

Insulation & Energy / Heating

- The heating is a major priority as currently the costs are prohibitive to heat the hall effectively for people booking and using the space.
- There was a question around whether we can wrap the building and keep the aesthetic for the community noting that there is a desire to retain the style and design of the hall's interior – particularly the internal roof trusses, panelling etc.
- The feasibility of wet heating system discussed - radiators etc. This should be considered as an option.
- Other options for consideration should include air source and ground source heat pumps.
- In considering solar panels, it was felt these would need to be on the back roof rather than the front roof to protect the aesthetic of the hall.
- Most windows appeared to have secondary glazing, however the roof lights may not.
- The architect noted that, because of the solid stone external walls, it may be financially prudent to insulate from inside and reinstate the finish as per other comparable projects.

Outdoor Space

- The overall ground is owned by the Crown Estate and leased to the Hall Committee for £1 per year. The Crown Estate are supportive of development work.
- Some concern was realised that the hall would require to become a member of the caravan club – this requires further clarification.
- It was noted that there was sufficient space to provide a number of outdoor improvements, but that this may impact the existing sports pitch. The Committee advised that the pitch is no longer regularly used.
- The outdoor space appeared on a visual inspection to have no major drainage issues. The Committee identified there is a boggy area at one end.
- It is noted that people currently use the pitch for camping and access the toilets via a code purchased online.
- The BBQ area was previously on the patio at the north wall of the Hall but will require to be relocated a) to accommodate the new lawnmower shed, b) to ensure greater fire safety if being used by overnight visitors and c) provide space for potential extension to the Hall.
- It was noted that EV charging points should be considered for both cars and E-bikes.

Expansion And Improvements To The Existing Kitchen

- It was noted that the kitchen had been renovated (circa 2018), but that the existing space was limiting for several existing larger scale events. The architect agreed to investigate the options for extending the kitchen.

Outdoor Play

- The Committee discussed outdoor play and agreed that a style similar to that in Wyviss Natural Play Park (Garve) would be appropriate with designs being sought for outdoor play from reputable providers.

Potential Extension To The Hall

- The creation of new space was discussed with a view to providing additional multifunctional spaces for work, events, classes etc. It was felt the existing meeting room was too small, but the main Hall was too large.
- It was suggested that an option to reconfigure and rebuild a wraparound to the existing Hall may address this and that this would be part of the study.
- It was noted that pre-covid, the Saturday social event was well attended but numbers declined, and this is no longer happening This was held in the meeting room, with the existing bar, and the license was most recently held by the Development Trust.
- The Saturday social's previous attendance numbers were around 14 but it was felt that the space was not conducive to a "pub like" atmosphere.
- It was agreed the bar must be retained as part of the Hall's expansion plans as it supports a number of events.
- It was suggested the bar space could be replaced with a more suitable (and slightly larger) multipurpose space, and a third smaller space may be created for workspace / office etc
- It was noted that this aspect of the work may be aspirational in relation to potential use and funding, but it would form part of this study.
- It was suggested that a new build extension could be partially glazed to create an inviting and comfortable space for social events.

Recommendations

In concluding the work, the following recommendations are made:

Phase One

1. It is recommended that ceiling and wall insulation is installed throughout the existing hall in line with the specifications noted in this report.
2. It is recommended that the four roof light windows are replaced with new, improved double glazed sky lights similar to those shown in this report.
3. It is recommended that solar photovoltaic panels are installed on site. This could be on the existing south facing roof, supplemented by ground mounted panels to generate electricity and reduce the overall operating costs.
4. It is recommended that, after the first full year following the above improvements, the running costs should be reviewed. Depending on these savings, a decision should be made on the need for a new heating system. If this is required, this report concludes that a new electrorad heating system be installed.
5. It is recommended that the group consider the options for reconfiguring the existing kitchen and toilet provision on the east end of the building to create a larger kitchen space.

Phase Two

6. It is recommended that consideration be given to creating five new caravan / campervan pitches with electric hook up, access to water supply, and associated amenity facilities.
7. It is recommended that consideration be given to installing electric vehicle and electric bike charging points on site.

Phase Three

8. It is recommended that the hall committee consider the installation of new children's play equipment, benches and a BBQ area.

Phase Four

9. It is recognised that there is an ambition for a larger hall extension project, however this report highlights a lack of sufficient available capital funding. It is recommended that the hall committee keep a watching brief on new funding opportunities, and where appropriate, progress the proposed extension when circumstances permit.

2 Introduction & Background

2.1 Glenlivet Hall

Glenlivet Public Hall was gifted to the community by the owners of the Glenlivet Distillery for community use. Today, the Hall hosts various groups for regular activities such as sports, music, dancing, and drama. In addition to these regular activities, the Hall serves as a venue for public and private events. Some of its recurring gatherings include the Pensioners Party in January, Hogmanay celebrations, teas by the bridge in May, and Tea in the Park annually in August.

2.2 Glenlivet Hall Committee

The Hall is managed and operated by a Hall Committee who are all volunteers but supported by a Development Officer. The Committee comprise the following members.

Derek Rickett – Chairman
Derek began his career in factory roles before starting Registered Nurse training on New Year's Eve in 1990. His experience spans Patient Care, Project Management, and Senior Management.

He worked as a Theatre and Intensive Care Nurse, advancing to Ward Manager of a Day Surgery Unit. In project management, Derek completed the Prince2 course, managing up to 19 projects, including procurement planning for building and IT.

As a senior manager, he oversaw 95 team members across community nursing, specialist nurses, and rapid response teams, and developed five-year and succession plans. Derek's skills can support future projects to make Glenlivet Public Hall fit for future generations.

Carole Stuart – Treasurer
Lorraine Clark- Trustee
Sharon Rickett-Trustee
Tricia Lawson – Trustee

2.3 Tomintoul & Glenlivet Development Trust

The Tomintoul & Glenlivet Development Trust was established in May 2012 after a period of community consultation on how best to address the economic decline which had been experienced locally, prompted by the two main hotels in the village of Tomintoul closing.

The stated **aim** of TGDT is to develop, inspire and embrace a sustainable vibrant future for the Tomintoul and Glenlivet area.

The Glenlivet Hall Project is supported by the Development Trust, with representation on the group from two key staff members:

- Claire Filer-Glenlivet &Inveravon Development Officer
- Oliver Giles – Tomintoul & Glenlivet Development Trust Manager

3 Market Assessment – Local Area Assessment

3.1 Glenlivet Community Overview

Located on the northern border of the Cairngorms National Park Glenlivet is a small rural community facing the same challenges as similar villages throughout rural Scotland.

The history of the Glenlivet area has been largely shaped by the development of the agriculture, tourism, and whisky industries over time.

A 2022 DTA Scotland Community Insight report identifies the following summary of key demographic information relating to the Glenlivet area.

- The overall population is around 885, with 51% male and 49% female.
- The percentage of population over 65 (25%) is higher than both the figure for Moray (22%) and nationally (19.3%).
- Population has shown a steady increase over the last 20 years (approximately 45%)
- Percentage of the population claiming any unemployment and incapacity benefits are significantly lower than the national average.
- Whilst no households in the area fall within the most 20% deprived areas overall, 871 people fall within the most 20% deprived for geographic access to services (as shown in the more detailed SIMD statistics).
- From the 2011 census, 9% of people locally are providing unpaid care in their household (3.5% are doing so in excess of 50 hours per week).
- The energy rating scores of domestic buildings locally are considerably lower than the Scottish average, with EPC Band A-C making up only 14.3% compared to 54.5% nationally.
- Local employment is predominantly made up of jobs within the Transport sector (40%), and the manufacturing sector (40%).
- Data shows that 54% of the local community have broadband speeds below the Universal Service Obligation (compared to 3.7% nationally).

3.2 Rural Deprivation

The Scottish Rural Policy Centre (SRUC) published a report entitled Rural Scotland in Focus, which sought to monitor how rural Scotland is changing. It focuses on population trends, the lives of young people, the levels and experiences of poverty and disadvantage and how use of our finite rural land resource is negotiated through planning and other means. With specific reference to the project in Glenlivet, it is important to consider the aspects of rural inequalities, which, as listed below, create challenges to living that are not experienced by communities within larger urban areas.

Employment Issues and Inequalities

In reviewing employment in rural areas, the SRUC report highlights a significantly larger percentage of those in part time or smaller contract jobs, often with lower hourly rates or salaries than counterparts in urban population centers. Many rural areas have become increasingly reliant on the Tourism Industry, and thus many jobs are seasonal in demand.

Fuel Poverty

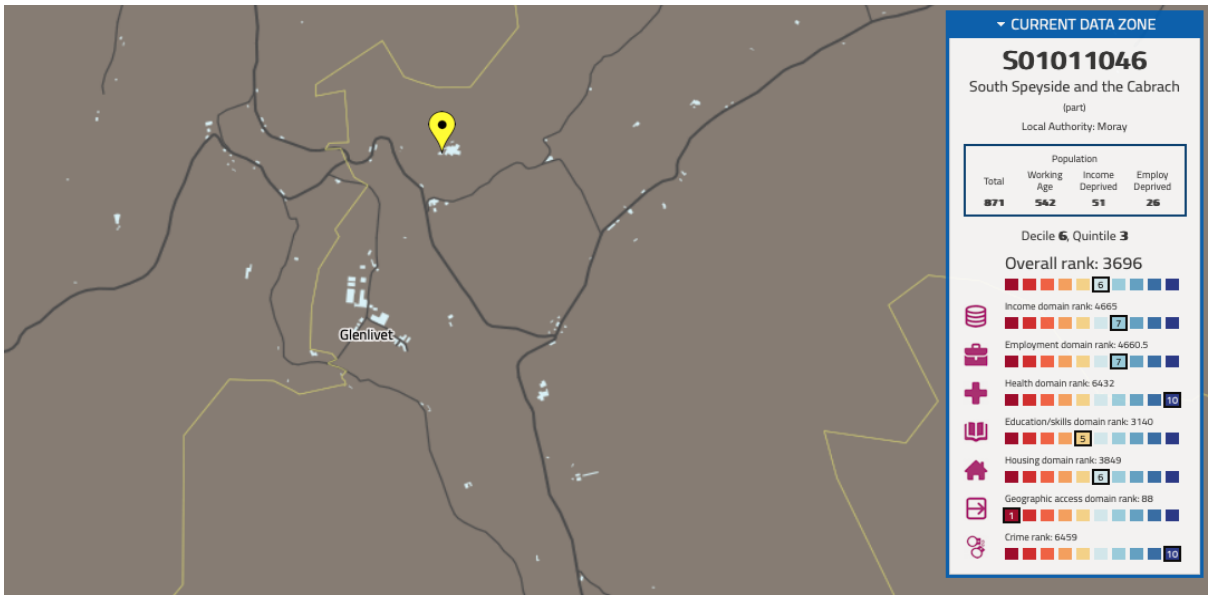
Living out-with larger urban areas is likely to increase the costs of goods overall – primarily due to the cost of the supply chain network required. This can be seen in the cost of petrol and diesel with a predominant market of independent providers, unable to offer the prices of larger national outlets. This issue raises a secondary cost to residents, with rural communities relying more on private transport, and often having to travel further for services. Ultimately, for residents of communities such as those in and around Glenlivet, more fuel is required, and that fuel is often supplied at a higher cost.

The “Minimum Income Standard for Remote Rural Scotland” report follows on from work and research on the Minimum Income Standard for Scotland. Considering the previously noted inequalities in rural living, the report headlines that the cost of food and consumable goods are between 10-50% higher in rural areas, whilst clothing and household goods are between 30-50% higher than in urban areas.

3.3 SIMD Assessment

The Scottish Index of Multiple Deprivation (SIMD) employs a methodical approach to measure and analyse deprivation across diverse dimensions in various geographic areas of Scotland. The methodology involves selecting key indicators, such as income, employment, health, education, crime, and housing, and collecting standardized data from sources like surveys and census records. These indicators are weighted based on their significance, and a comprehensive SIMD score is calculated for each area, providing an overall measure of deprivation.

The hall sits in one datazone which is shown below. As demonstrated, there is a clear issue with geographical access deprivations, ranking 55th in Scotland as the most deprived in this index.



4 Market Assessment – Tourism & Heritage

Whilst the Hall is essentially for the use of by residents the land around the Hall has a current touring caravan licence for 5 caravans and 5 tents. The Hall provides toilet facilities for these visitors and part of the overall project’s longer-term aspirations is to upgrade these facilities and also to extend the Hall building. Part of the proposed new extension includes more easily accessible toilets. Showers and a laundry facility.
The future of the hall is likely to require a continue reliance in part on local tourism to ensure a modest income for the hall’s operating costs.

4.1 VisitScotland – Key Tourism Trends

VisitScotland has highlighted several key trends in tourism for 2024:

Sustainable and Responsible Tourism	There is a growing emphasis on sustainability, with travellers increasingly seeking eco-friendly options. This includes support for local communities, conservation efforts, and sustainable practices in accommodation and transportation.

Experiential and Authentic Travel	Tourists are moving away from traditional sightseeing towards more immersive experiences. This trend includes a desire for local culture, heritage, and authentic interactions, such as local food tours, craft workshops, and wildlife experiences.
Health and Wellness Tourism	The focus on well-being continues to rise, with more visitors seeking destinations that offer wellness retreats, spa experiences, and outdoor activities like hiking and yoga in scenic locations.
Technology Integration	Technology is becoming increasingly important in tourism, with more travellers using digital tools for planning, booking, and on-the-go navigation. Virtual and augmented reality experiences are also gaining traction, enhancing the visitor experience.
Focus on Local and Unique Experiences	There is a notable trend towards supporting local businesses and experiencing unique, less-travelled destinations. This includes niche tourism markets like food and drink trails, heritage tours, and adventure sports.
Diverse and Inclusive Tourism	Efforts to make tourism more inclusive are growing, with destinations promoting accessibility and diversity. This includes catering to a wider range of needs and interests, from family-friendly activities to LGBTQ+ travel options.

4.2 Tourism in Moray

Tourism generates over 10% of Moray's total employment and 3.8% of the total turnover of businesses. Visitor spending in Moray is in the region of £85m-£90m per year.

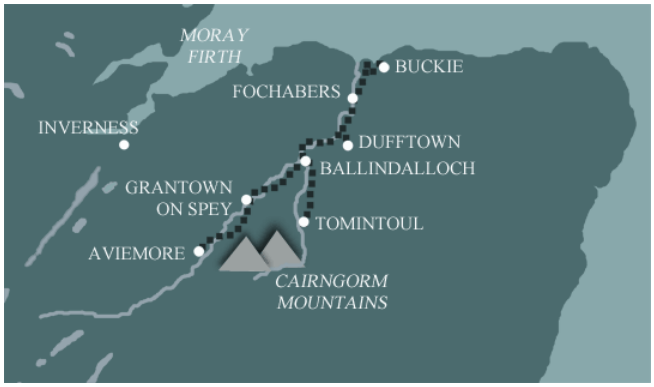
"In 2025, Moray will be known nationally and internationally as an exceptionally attractive destination for leisure and business visitors, offering memorable experiences, based on the area's unique assets, including malt whisky, the heritage of Macbeth, its pure natural environment and superb food using local produce"

The local tourism strategy notes the following ambitions for the region:

- To double the economic value of tourism
- To double the size of the tourism-related workforce, with at least 80% living locally and fully skilled for their job, and trained in customer care
- To achieve annual occupancy of serviced accommodation rooms of at least 75%, and at least 65% occupancy of self-catering units.

4.3 The Speyside Way

The Speyside Way is a scenic 65-mile walking route from Buckie to Aviemore in Scotland's Cairngorms National Park. It passes through whisky country, following the River Spey, villages, forests, and hills, with stops at distilleries like Aberlour and Glenlivet.



The well-marked trail offers many and varied viewpoints, birdwatching, and insights into local history and heritage. Suitable for seasoned hikers and casual walkers, the trail offers off trail links like a spur to Tomintoul.

Accommodation along the trail ranges from B&Bs to campsites, making it a perfect choice for exploring Scotland's natural beauty and cultural heritage. This could include the proposed caravan and camping facilities at Glenlivet Hall.

4.4 Scotland Outlook 2030 – Scotland's Future Tourism Strategy

Scotland Outlook 2030 has been developed through an equal partnership between the Scottish Tourism Alliance, Scottish Government, VisitScotland, Scottish Enterprise, Highlands and Islands Enterprise and Skills Development Scotland. It has been guided by the Strategy Steering Group with representatives from industry, public bodies and the partner organisations.

This vision acknowledges the strength and potential of Scotland's Tourism sector whilst seeking to "protect and preserve our places, with the industry acting as pioneers for delivering responsible tourism"

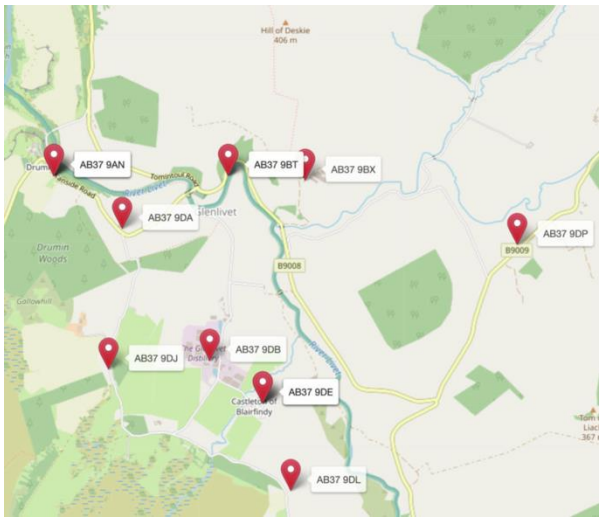
The possible development of infrastructure at the Hall resonates with the following key commitments of this policy:

- Scotland's tourism sector will make a full contribution to our national ambition to become a net-zero society by 2045.
- Tourism leads to improved community wellbeing and nurtures thriving places across Scotland.
- Places across Scotland can develop and manage tourism effectively and responsibly.
- Local communities are engaged and supported as valued stakeholders in tourism development and delivery.
- Working in partnership is essential to delivering our tourism work.

5 Community Engagement & Support

5.1 Hall Survey – 2022

In 2022, the Tomintoul & Glenlivet Development Trust undertook a community survey both online, and via hard copies. The survey received 66 responses, with the findings noted below.



Most respondents are from the Glenlivet and Inveravon area with 58 from the AB37 9 postcode sector, this includes 7 responses from Tomintoul and Kirkmichael postcodes.

Of those 58 responses from the Glenlivet & Inveravon area, 16 are from the postcode units AB37 9BX, AB37 9BT, AB37 9DA, AB37 9DE, AB37 9DB, AB37 9AN, AB37 9DL, AB37 9DP, and AB37 9DJ surrounding the hall site.

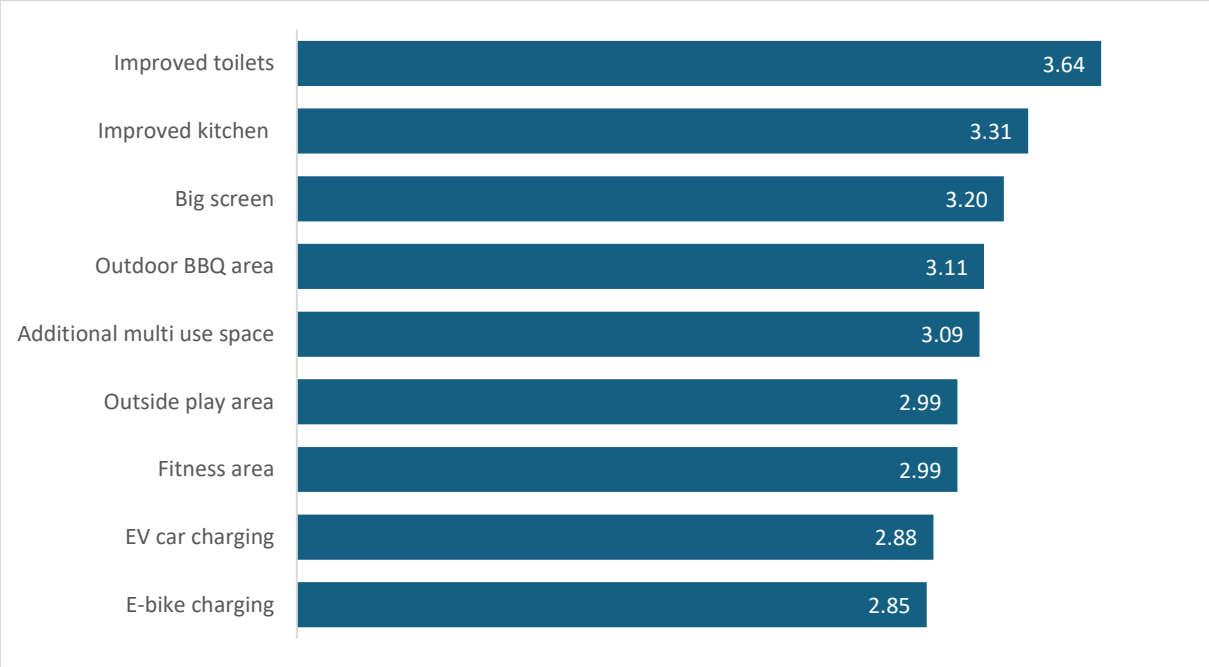
A further 7 responses came from respondents outside of the Glenlivet and Inveravon area – Glenrinnes (3), Craigellachie (1), Knockando (1), Elgin (1), and Newport (1). In considering the importance of the hall, as shown below, only 2% of respondents felt the hall was not important.

In your opinion, how important is it to have a community hall in the area?



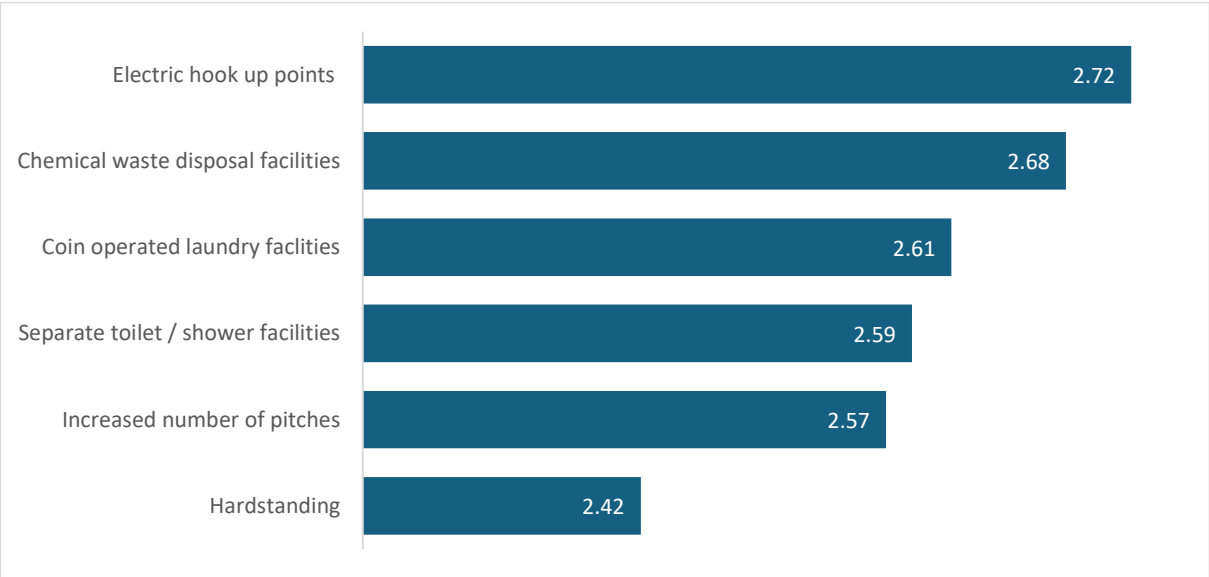
Comments around this question emphasise the importance of community halls, especially in rural or remote areas, for fostering social connections and mental well-being. They note that the hall serves as a central gathering places for socialising, sharing information, and building relationships, helping to maintain the sense of community. It is considered essential for all generations to have access to this shared space year-round, especially in spread-out rural areas.

In considering a list of **potential uses**, a number of activities and investments were proposed, with the following results showing the priorities (using a Likert score out of 4, where 4 is the highest):



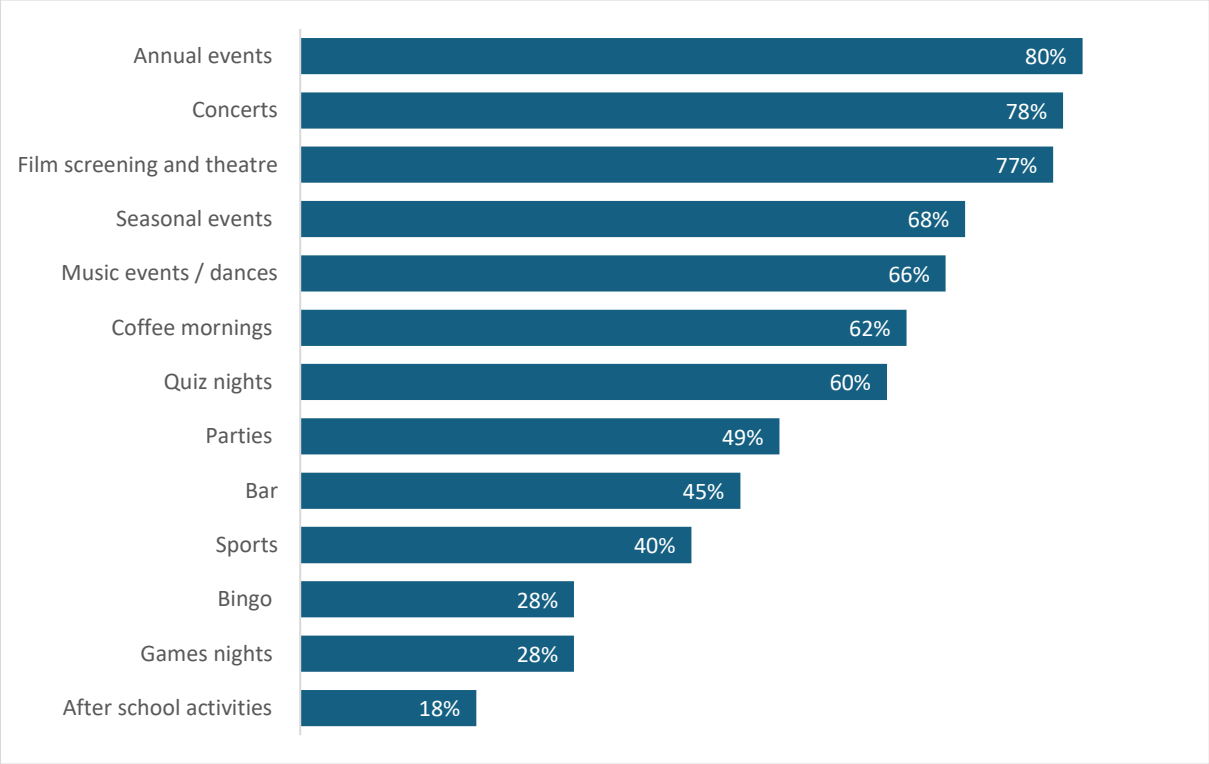
A number of comments on the above question focused on the need to provide for young people, and the need to bring together different groups in the community within the same space. Comments were also made around the need to ensure the facility can be maintained, including suggestions of a caretaker or staff member.

In considering **facilities for caravans**, the following results show feedback on a number of possible improvements and investments (again these are presented using a Likert score out of 4, where 4 is the highest):



Comments on these questions focused on the risk of over developing the site, and the essential nature of hook up points. Concern was raised over the lack of financial benefit locally, noting that caravans negate the need for people to spend in local businesses and shops.

In considering **activities within the hall**, the following results show feedback on which people would be likely to attend:



When asked to specify which classes they would attend the most frequent suggestion was for yoga (15 respondents). The need for indoor space for sports and fitness activities was underlined with further class suggestions of badminton (4), bowls (5), dance (5), exercise (3), Pilates (2), and tennis/ table tennis (2). Responses to this and the previous question on facilities would suggest that whilst indoor space for sports and fitness activities is desired a 'fixed' fitness area/ exercise space is not.

The need for an indoor meeting space for various activities, classes, and clubs was mentioned by 14 respondents. Suggestions included games such as chess, bridge and darts; education/ workshops/ training/ talks on a variety of topics including first aid, digital literacy, energy saving, rural policing; finances, careers, cookery, arts and craft, local history, and repair workshops.

Thirty-eight respondents commented on **what stopped them from using the hall**. Three people commented that nothing stopped them. However, the most common reason cited was due to the lack of activities and events on offer or those that were on offer having limited audience appeal (13). Additional factors commented on included: people being busy and/or a lack of activities in the evening or weekend (6); poor communication about what was on (5); user comfort/ cold (3); energy costs related to hall hire (3); poor facilities/ not user friendly (2); hall being closed (2); distance (4); and concerns related to Covid (1).

5.2 School Engagement

In September 2024, the Development Trust and Hall Committee engaged with the local school pupils to discuss options for new play equipment at the village hall. Based on the feedback from the primary school pupils, the key preferences and dislikes for the proposed play investment are as follows:

Preferred Play Equipment:

1. **Tower with Slides:** This was the most popular choice, as the children enjoyed the idea of climbing and sliding. They also preferred having multiple "obstacle options" around the tower to make it more engaging.
2. **Zip Wire:** The zip wire was the second most popular option and would be a solid choice if the tower proves too expensive.
3. **In-ground Trampolines:** These were liked but raised concerns about water collection, as children worried about wet feet. If a solution for drainage is possible, they would be a well-liked addition.
4. **Roundabout:** Also rated quite highly among the children.

Disliked Play Equipment:

1. **Rope Tower:** The children didn't like this as it didn't offer a swinging element.
2. **Basket Swing and See-saws:** These did not inspire much interest and were dismissed.
3. **Spring Toys and Tyre Arrangements:** Children disliked these, especially the tyre setup, as they felt it didn't allow for high swings.

In summary, the children's top preference is a tower with slides and obstacles, followed by the zip wire, in-ground trampolines (if water issues can be resolved), and the roundabout. They were clear about their dislike for equipment that lacks excitement or swinging features, such as rope towers, basket swings, and spring toys.

5.3 Community Engagement Event – October 2024

Following the community survey, a local drop in event was held at Glenlivet hall on 3rd October 2024. At this session, the prioritised list of actions below was presented and discussed:

- **Priority One** Improved insulation for the existing Hall and investigate options for new energy / heating systems for the building.
- **Priority Two** Improvements to the outside space – to provide for campervans and visitors – hook up points, EV charging, BBQ space
- **Priority Three** Internal expansion and improvements to the kitchen.
- **Priority Four** Consider options for new Outdoor play – children's and outdoor gym.
- **Priority Five** Prepare options for an extension to the Hall to provide more appropriate sizes multifunctional spaces.

In addition to these, a number of concept images, designs, and examples of best practice were shown to the public.

The event was attended by approximately 18 local residents with the following feedback provided:

Priority One Improved insulation for the existing Hall and investigate options for new energy / heating systems for the building.	• It was noted that if there was a lack of roof space, then consideration should be given to installing Solar Panels along the space at the back of the pitch. • Concerns were raised over the ability of Air Sourced heat pumps to operate in the extreme temperatures experienced locally. • Concerns were raised over experience of air and ground source heat pumps breaking down, and the need for a secondary / back up system. • Concerns were raised over the complexity of a ground source heat up's operating system and user interface.

	• A number of attendees noted that a biomass system would not be appropriate as the hall would need to be staffed.
Priority Two Improvements to the outside space – to provide for campervans and visitors – hook up points, EV charging, BBQ space	• Concerns were noted regarding the level of noise from heavy vehicles passing at night close to the caravan pitches. • One attendee noted that the project should focus on the community and was not keen on the inclusion of enhanced campervan provision. • A conversation was held around whether the space would attract an increase in campervans or whether they would just camp elsewhere. It was noted that there is high demand locally, and perhaps marketing and promotion would ensure a suitable occupancy rate of what was going to be a relatively small site.
Priority Three Internal expansion and improvements to the kitchen.	• It was desirable to have an open serving hatch, and better use of more space between Kitchen and the Storeroom at the back. • For options to expand the kitchen, it was suggested that the gents' toilets are removed, noting that there is sufficient toilet provision elsewhere in the hall.
Priority Four Consider options for new Outdoor play – children's and outdoor gym.	• There was a request to consider a Multi-Use Games Area (MUGA) lined for various sports including volleyball, tennis etc. This could even be frozen in winter to provide curling.
Priority Five Prepare options for an extension to the Hall to provide more appropriate sizes multifunctional spaces	• Attendees were aware that this was a significant capital cost and may not be feasible. However they noted the importance of ensuring earlier investment is phased, and not piecemeal – i.e. the ambition for the large extension and design can still be achieved or added on to smaller interim works and improvements. • Following feedback on the layout, the configuration of the store and social space was amended to the version now included in this report.
Other Comments	• There was a suggestion that the hall space and outdoor pitch is poorly promoted. • It was suggested that the hall ownership be transferred to the Development Trust who can use it as an office. This may also address the cost of VAT for the major development options.

5.4 Further Evidence of Support

Throughout this project a number of letters of support were provided. These have been included in Appendix One.

6 Community Benefit Assessment

Community Empowerment Act

The Community Empowerment Act helps to empower community groups through the ownership of land and buildings, and by strengthening their voices in the decisions that matter to them. In turn this allows communities to input to the community planning process, ensuring that local service providers work together even more closely with communities to meet the needs of the people who use them.

It also provides new rights for communities, allowing them to take ownership of land and buildings owned by public bodies, where it can be demonstrated to be in the best interest of the community. The Act applies to both communities of place and communities of interest.

The Bill was passed by the Scottish Parliament on 17 June 2015 and received Royal Assent, becoming an Act, on 24 July 2015 and becoming law in January 2017.

Community Led Regeneration & Community Wealth Building

Community-Led Regeneration in Scotland emphasises the empowerment of local communities to lead their own development initiatives. This approach encourages communities to identify their specific needs and priorities, with support from the Scottish Government and partners like local authorities, housing associations, and development trusts. Grant aid programmes such as the Regeneration Capital Grant Fund (RCGF) and the Empowering Communities Fund provide financial backing to projects focused on social, economic, and environmental regeneration improvements. These funds aim to tackle inequality, enhance local infrastructure, and foster inclusive growth by creating opportunities for communities to take control of local assets, revitalise their neighbourhoods, and build resilience.

Social Benefits

Improving a local village hall can provide significant social benefits to a small rural community such as Glenlivet. A well-maintained and modernised village hall serves as a central gathering point, fostering stronger social connections among residents. It offers a versatile space for hosting events, meetings, and activities, allowing people of all ages to come together and interact. This can help reduce feelings of isolation, which are often more common in rural areas, by providing opportunities for socialising, and shared experiences.

An improved village hall can encourage the development of new programs and services that cater to the needs of the community, such as workshops, health initiatives, and recreational activities. The hall can also serve as a hub empowering residents to actively contribute to their community's development. In turn, this strengthens the community's resilience and fosters a collective sense of pride and responsibility for the village.

Health Benefits

Improving Glenlivet hall can offer significant health benefits local residents, creating a space for physical activity. With enhanced facilities, the hall can accommodate a wider range of classes which promote physical fitness and help residents stay active, especially in areas where access to gyms or recreational centres is limited. Regular physical activity not only improves cardiovascular health, strength, and flexibility but also helps reduce the risk of chronic conditions such as diabetes, hypertension, and obesity.

In addition to physical health, upgrading the hall can also support mental and emotional well-being. It can host local groups, clubs, and social events that foster a sense of community and reduce isolation. As noted above, by providing a welcoming space for residents to gather, share experiences, and build social connections, the village hall becomes a vital resource in combatting loneliness and promoting mental health.

Economic Benefits

Improving the hall and enhancing the outdoor caravan spaces will provide economic benefits to the community. By attracting visitors and tourists to the area, especially during summer months, the caravan pitches will generate increased revenue for the Group. Tourists who use the pitches are likely to spend money at businesses in the wider area, including shops, pubs, cafes, and attractions, boosting the local economy.

Additionally, the village hall itself can become a source of revenue by being rented out for events, conferences, or private functions, especially with the added attraction of caravan accommodation. This added functionality makes the hall more versatile, drawing in visitors for workshops, festivals, or community events, which in turn supports local employment and provides funding for further community projects. The combined effect of tourism and the expanded use of the village hall strengthens the economic base of the community, making it more sustainable and less dependent on external factors. This development not only enhances the village's appeal but also promotes long-term economic resilience.

7 Comparable Examples

Case Study 1: Shiskine Hall, Isle of Arran



Shiskine Hall, located on the Isle of Arran, is a vibrant community centre that serves as a hub for local activities and events. Situated in the village of Shiskine, it features a spacious interior ideal for gatherings, celebrations, and performances. Surrounded by stunning landscapes, Shiskine Hall fosters community spirit and provides a welcoming space for residents and visitors to celebrate the island's rich culture and traditions.

The upgraded its heating system to air source heat pumps, significantly reducing energy costs and carbon emissions. The project, supported by a Scottish Government SME Loan and a £10,000 grant, replaced outdated electric heaters, leading to annual savings of up to £1,060 and a CO2 reduction of approximately 1.7 tonnes. The hall's improved efficiency promotes year-round use, benefiting various community activities.

Case Study 2:Garve Hall, Wester Ross



Garve Hall, situated Wester Ross, is an essential community centre for local residents. It hosts a variety of events, including meetings, cultural performances, and social gatherings. Surrounded by the beautiful Highlands, Garve Hall fosters community ties and promotes local culture, making it a vital hub for residents and visitors alike.

The upgrades to Garve Hall in Achnasheen focused on modernising its facilities, improving energy efficiency, and enhancing accessibility. Key improvements included better insulation, a new energy-efficient heating system, and the installation of LED lighting, all aimed at reducing energy costs and environmental impact. The kitchen and toilet facilities were updated to meet modern standards, and accessibility was improved with a new ramp and accessible restroom. These enhancements resulted in increased usage of the hall for community events, private functions, and classes. The energy-efficient design reduced operational costs, while the modernized, more inclusive space fostered greater community engagement, making Garve Hall a more vibrant, welcoming venue for all. In the first full year following the hall's refurbishment, the group have reported savings of 50% on their energy costs.

Case Study 3: Kilchrenan Hall, Argyll & Bute



Kilchrenan Hall, located in Argyll and Bute, serves as a vital community centre for the village and surrounding area. This welcoming venue hosts various events, including local meetings, cultural performances, and social gatherings. Set against the stunning backdrop of the Scottish countryside, Kilchrenan Hall plays an essential role in fostering community spirit and bringing residents together, making it a cherished hub for social and cultural activities in the region. The hall faced closure due to rising energy costs and inefficiency. To address this, trustees sought support from Business Energy Scotland and expert consultant, leading to significant upgrades, including LED lighting, new roof insulation, and an air source heat pump. These improvements are expected to reduce emissions by 79% and create a warmer, more welcoming space for community activities. The hall is now more affordable to operate, ensuring its continued role as a central hub for the local community.

8 Priority 1: Existing Hall Insulation

8.1 Overview & Context

The current cost of heating the hall is key concern, and driver for this work. Whilst the consideration of an improved heating system is important, the Hall Committee note the need to improve the overall efficiency of the building. A number of key solutions have been considered, including wrapping the building while maintaining the aesthetic of the hall's interior features, such as roof trusses and panelling.

It was observed that while most windows have secondary glazing, the roof lights might not. The architect has advised that insulating from the inside of the building could be more cost-effective, given the solid stone external walls, and suggested reinstating the finish afterward to align with other similar projects. This approach would balance cost savings with aesthetic preservation.

Recognising that improved insulation can provide significant benefits to the hall, the following key areas are considered:

- **Wall Insulation** - Insulating the external and internal walls helps maintain consistent indoor temperatures, reducing the need for excessive heating in winter and cooling in summer. This lowers energy consumption and makes the hall more comfortable for users.
- **Roof and Ceiling** – It is noted that a large portion of heat escapes through the roof, so insulating the ceiling or roof space can greatly reduce heat loss. This helps in maintaining a stable environment, especially during colder months, and reduces energy bills. On advice from the architect, it is suggested that an internal insulation on the current roof may be the most appropriate option.
- **Floors** - Insulating floors, especially in older buildings, prevents cold air from seeping through from below. This is particularly beneficial in halls with large open spaces where cold floors can make the entire area feel colder.
- **Doors and Windows** - Properly insulating doors and windows with double glazing or adding weather stripping can prevent drafts, minimise heat loss, and improve overall energy efficiency. This also helps to reduce noise pollution, making the hall more versatile for a variety of uses.

8.2 Consideration of Options

Roof Insulation Options

There are several effective options for insulating the roof space in the hall, each offering different advantages depending on the building's structure, budget, and insulation needs. These include:

- **Fiberglass or Mineral Wool Batts** - Rolls or batts of fiberglass or mineral wool are laid between the joists in the roof space
- **Loose-Fill Insulation (Cellulose or Fiberglass)** - Loose-fill insulation made of cellulose (often recycled paper) or fiberglass is blown into the roof cavity.
- **Spray Foam Insulation** - Spray foam expands upon application to fill gaps and cracks, offering a tight seal.
- **Rigid Foam Insulation** - Rigid foam boards are fitted between roof rafters or laid across them to provide a solid insulation layer.
- **Reflective or Radiant Barrier Insulation -** Thin reflective material, usually aluminium foil, is installed to reflect heat rather than absorb it.

A full comparison of these options has been included in Appendix Two.

Wall Insulation Options

There are several effective options for insulating the wall space in the hall, each offering different advantages depending on the building's structure, budget, and insulation needs. These include:

- **Batt Insulation** - Typically made from fiberglass or mineral wool. Cut to fit between wall studs, effective for standard wall cavities.
- **Spray Foam Insulation** - Expands on application, made from polyurethane. Sprayed into wall cavities; can also seal gaps.
- **Rigid Foam Board Insulation**- Made from polystyrene, polyisocyanurate, or XPS, cut to size and installed on walls; can be used for exterior insulation as well.
- **Mineral Wool (Rock Wool) Insulation** - Made from natural or recycled materials, such as stone or slag. Comes in batts or can be blown in.
- **Reflective or Radiant Barrier Insulation** - Foil or reflective material installed in attics or walls facing radiant heat sources.
- **Insulated Wall Panels** - Prefabricated panels with insulation built-in mounted directly to wall framing or existing walls

A full comparison of these options has been included in Appendix Two.

Floor Insulation Options

There are several effective options for insulating the floor in the hall, each offering different advantages depending on the building's structure, budget, and insulation needs. These include:

- **Rigid Foam Boards (PIR/Polyurethane or Polystyrene Boards)** - High-performance insulation boards made from polyisocyanurate (PIR), polyurethane, or polystyrene.
- **Mineral Wool (Rockwool or Fiberglass Insulation)** - Flexible batt or roll insulation made from natural stone or recycled materials.
- **Spray Foam Insulation (Closed-Cell)** - Spray-applied foam that expands to fill gaps and provide airtight insulation.
- **Insulated Floor Panels** - Pre-insulated floor panels that combine insulation and structural support.
- **Reflective Foil Insulation** - Thin sheets of foil-faced insulation that reflect heat back into the space

A full comparison of these options has been included in Appendix Two.

Recommended Insulation Options

In reviewing the options appropriate for this hall, the following methods are recommended for the hall subject to condensation surveys:

Wall Insulation	• Internal Walls insulation total area 600m^2 • Strap & line inside face of external walls with 50x38mm battens • 95x45 timber frame with Frametherm 35 mineral wool between timber studs • Vapour control layer across inside of studs • 30mm Unilin XT-TF PIR board insulation • 25mm battens for services then 15mm plasterboard
Ceilings/roof	• Comb ceiling in main hall – area 180m^2 • 150mm Unilin PIR between rafters with 50mm airspace above • Vapour control layer across under side. • Then ceiling finish. • Horizontal ceilings over kitchen & meeting room areas 150m^2 add 200mm Loft Roll 40 (assuming there is 200mm there already), want 400mm in total

Roof Light Improvements

In assessing the building, it is noted that the existing windows are all double glazed, and in good condition. The seven rooflights however, are single glazed, with evidence of weathering. Double glazing skylights are an essential feature in any building, offering both energy efficiency and enhanced comfort.

The dual layers of glass create an insulating barrier that significantly reduces heat loss in the winter and prevents excessive heat gain during the summer, making spaces more thermally regulated throughout the year. This not only lowers energy costs by reducing the need for artificial heating and cooling but also enhances the overall comfort of the room.

Additionally, double glazing minimises condensation, which can lead to dampness and mould, while also reducing noise from outside, creating a quieter indoor environment. By maintaining natural light without compromising insulation, double glazing skylights are a practical and eco-friendly solution for improving the energy performance of a building.





8.3 Capital Costs

Recognising the options recommended above, quotes and prices have been sought, with the estimated cost of installing this noted in the following table. Full detailed costs will be identified through the relevant procurement process.

Replacement Skylight Windows (4)

Element	Cost	Qty.	Price
Fixed Skylight 750x900mm	£1,104	4	£4,418
Rain Sensor & Remote	£250	4	£1,000
Installation	Estimate		£2,500
VAT	20%		£1,584
Total Costs			**£9,501**

Insulation

Several insulation companies were approached to provide estimates for materials and installation. This was based on the specification noted above. The average costs are shown in the table below:

Insulation / Improvement	Costs
Internal Walls	£39,600
Comb Ceiling Insulation	£14,850
Horizontal Ceilings	£3,750
VAT 20%	£11,640
Total Costs	**£69,840**

9 Priority 2: Improved Energy & Heating Systems

9.1 Overview & Context

The potential for using a wet heating system with radiators was considered, along with alternative options like solar panels, which would be installed on the back roof, and other sustainable options such as air source and ground source heat pumps.

The Group has applied for a hall energy audit through Business Energy Scotland which will provide further recommendations as to which of the best options are suitable, and relative priorities, advantages, and disadvantages of each.

9.2 Solar Panels

Installing solar panels on a community building offers significant environmental and financial benefits. First and foremost, solar energy is a clean and renewable source of power that reduces reliance on fossil fuels, which in turn lowers the building's carbon footprint. Solar panels also provide long-term energy security, as they rely on a consistent and abundant energy source. This means the community building can operate independently of rising electricity prices or power outages, ensuring continuity of services and activities.

In addition to environmental benefits, solar panels can also generate significant financial savings for the community. Once installed, solar panels produce energy with minimal ongoing costs, allowing the building to reduce or even eliminate its monthly electricity bills. Any excess energy produced may be able to be sold back to the grid, generating additional income that can be reinvested in other community projects; however some capital funders will not permit this, and therefor batter storage options should also be considered. Solar panels can also increase the value of the building and demonstrate the community's commitment to green initiatives, fostering a sense of environmental responsibility and potentially attracting further investments or grants for sustainability projects.

In consulting with Renewably Energy experts, it is recommended that the hall considered 28 solar photovoltaic panels – mounted on the south facing roof and along the edge of the site (ground mounted). This would save £1,953 in energy costs and reduce the CO2 emissions by around 3 tons.

9.3 Comparison of Heating Options

When selecting a heating system for a public building, several factors need to be considered, including energy efficiency, cost, environmental impact, and comfort. Different heating systems offer different benefits and drawbacks, making it essential to match the system to the building's size, purpose, and needs.

The following key considerations are vital across all options:

- Building Size and Layout – Whilst larger public buildings may need more complex systems to ensure even heat distribution, the hall, even with the extension is relatively small and as such can benefit from simpler systems with less requirements around zoning, and with spaces that are easier to heat effectively.
- User Group Comfort – As a village hall, the occupancy will fluctuate, similarly, some events and activities will likely require more heat than others to ensure user comfort.
- Energy Efficiency – There is a clear desire from the group to improve the energy efficiency of the building – both through the refurbishment and extension construction, and via investment in energy-efficient systems. This may require a higher initial cost but will result in lower lifetime expenses.

- Maintenance and Reliability – The hall requires systems that are low-maintenance and reliable to minimise disruptions. In considering the extreme weather that can be experienced in the winter, there may be a requirement to consider alternative or secondary systems depending on their ability to heat.

For Glenlivet hall, the following systems were considered:

- Radiant Heating (Underfloor or Radiator)
- Air-Source Heat Pumps (Wet System)
- Ground-Source Heat Pump (Wet System)
- Updated Electric Heating Systems
- Biomass Heating Systems (Wood Pellets or Chips)
- Solar Heating (Solar Thermal)

A detailed comparison of these systems, including an overview of the benefits, considerations and concerns can be found in Appendix Three.

With advice sought from the project architect, technical experts, and through the public consultation, it is recommended that a new electric heating system would be most appropriate for the hall. On advice from the project architect, the Electrorad System used recently in Garve Public Hall has been suggested as the most effective and efficient for a building of this type, noting the usage, and the local climate.

9.4 Capital Costs & Revenue Considerations

Item	Details	Costs
Solal Photovoltaic Pannels	28 Pannels – Roof & Ground Mounted	£21,776
Heating Systems	Electrorad Heating System	£25,000
VAT (on heating system only)	20%	£5,000
Total Costs		**£51,776**

10 Priority 3: Caravan Pitches and Car & Bike Charging Stations

10.1 Overview & Context

Caravan Pitches And Electric Hook Ups

The Crown Estate owns the land on which the hall sits, leasing it to the Hall Committee for £1 per year and showing support for development work. Part of the outdoor area is currently leased to the Caravan Club, and further discussion is required as to how this partnership is moved forward.

There is sufficient space for outdoor improvements, but it may impact the existing sports pitch, which is no longer regularly used. A visual inspection of the outdoor space revealed no major drainage issues, except for a boggy area at one end.

It is noted that the license currently held for Caravan pitches is held by the Hall Committee and permits up to five pitches. This will require to be reviewed as the site is developed, with increased license requirements such as water provision, chemical waste and laundry – all of which have been considered within this report.

Revenue collection options for campervans and campers need to be considered, including methods such as online payments, tap-to-pay systems, QR codes, or fees for toilet and shower access. Currently, people use the pitch for camping and access the toilets via a code purchased online. It has been suggested that the BBQ area, previously on the patio at the north wall, will be imminently relocated to accommodate the new lawnmower shed, improve fire safety, and provide space for a potential hall extension.

Electric Vehicle Charging Points

Installing EV charging points in a rural community offers numerous benefits, including promoting sustainable transportation and reducing carbon emissions. By providing convenient access to charging stations, residents and visitors are more likely to adopt electric vehicles, contributing to improved air quality and a cleaner environment. Additionally, the presence of charging points can attract eco-conscious tourists, boosting the local economy. It also helps future-proof the community, ensuring it remains connected and accessible as electric vehicles become more prevalent. This infrastructure can foster a sense of community pride in leading the way towards a more sustainable future.

Consideration of the type of charger is vital for the group, considering the speed at which users will expect their vehicles to be charged. Noting the limited variety of activities at the site a fair assumption would be that visitors and passers- by would expect a more efficient and faster changer. As such a charging point with the capacity to charge quickly would be more appropriate.

There are three main types of EV charging – rapid, fast, and slow. These represent the power outputs, and therefore charging speeds, available to charge an EV. Each charger type has an associated set of connectors which are designed for low- or high-power use, and for either AC or DC charging. The group may wish to consider including more than one type of charger within their provision. The following summary offer a comparison of the three main charge point types:

	Rapid Chargers	Fast Chargers	Slow Chargers
Speed	• Fastest charging option, typically used at motorway stations.	• Moderate speed, offering 7 kW or 22 kW.	• Slowest charging, typically rated up to 3 kW.
Power	• Deliver 50 kW to 350 kW, with rates of 80% charge in 20-30 minutes.	• Can charge a 40-kWh battery in 4-6 hours (7 kW) or 1-2 hours (22 kW).	• Charging rates between 2.3 kW and 3.6 kW.
Usage	• Best for quick top-ups during long trips, requires vehicles with rapid-charging capabilities.	• Common in destinations like shopping centres; suitable for vehicles parked for an hour or more.	• Suitable for home charging overnight or where extended parking times are possible.

The revenue generated from EV charging points for cars, especially rapid chargers, depends on the charging fees, electricity costs, and usage rates. The following table demonstrates the earning potential for a site such as Glenlivet Hall, noting the following assumptions:

- In Scotland, fees for EV chargers (typically 50-150 kW) generally range from £0.30 to £0.70 per kWh.
- Rapid chargers allow vehicles to charge 80% of their battery in around 30-60 minutes depending on the car and charger capacity.
- A typical EV has a battery capacity of 40-60 kWh, with rapid charging sessions often consuming 20-40 kWh per session.

	Per Car	Per Week (10 cars)	Per Year (520 cars)
Charging Income (based on 50p / kwh)	£15	£150	£7,800
Cost (based on 30kwh charge at 20p/kwh)	£6	£60	£3,120
Net Revenue	£9	£90	£4,680

Electric Bike Chargers

E-bikes are increasingly popular due to their convenience, environmental benefits, and accessibility. They offer an easy, eco-friendly transportation option, reducing carbon emissions and reliance on cars for short trips. With pedal-assist or throttle modes, e-bikes require less effort than traditional bicycles, making them a suitable choice for people of varying fitness levels and those commuting longer distances.

To install e-bike charging points, several key infrastructure components are necessary to ensure reliable, safe, and user-friendly operation.

- Electrical infrastructure - Connection to the power grid or renewable energy systems.
- Charging stations - E-bike compatible charging units, weatherproof and safe.
- Safety systems - Overload protection, fire safety, and proper ventilation.
- Physical infrastructure - Secure parking, shelters, and lighting.
- Smart technology - Monitoring, payment, and data collection systems.
- Maintenance - Ongoing servicing and user support systems.

This infrastructure ensures that e-bike users have safe, reliable, and convenient access to charging while supporting sustainable transportation initiatives.

The cost of installing e-bike charging stations in Scotland can vary based on several factors, including the type of charging units, the location, and any required electrical work. Key considerations are noted below:

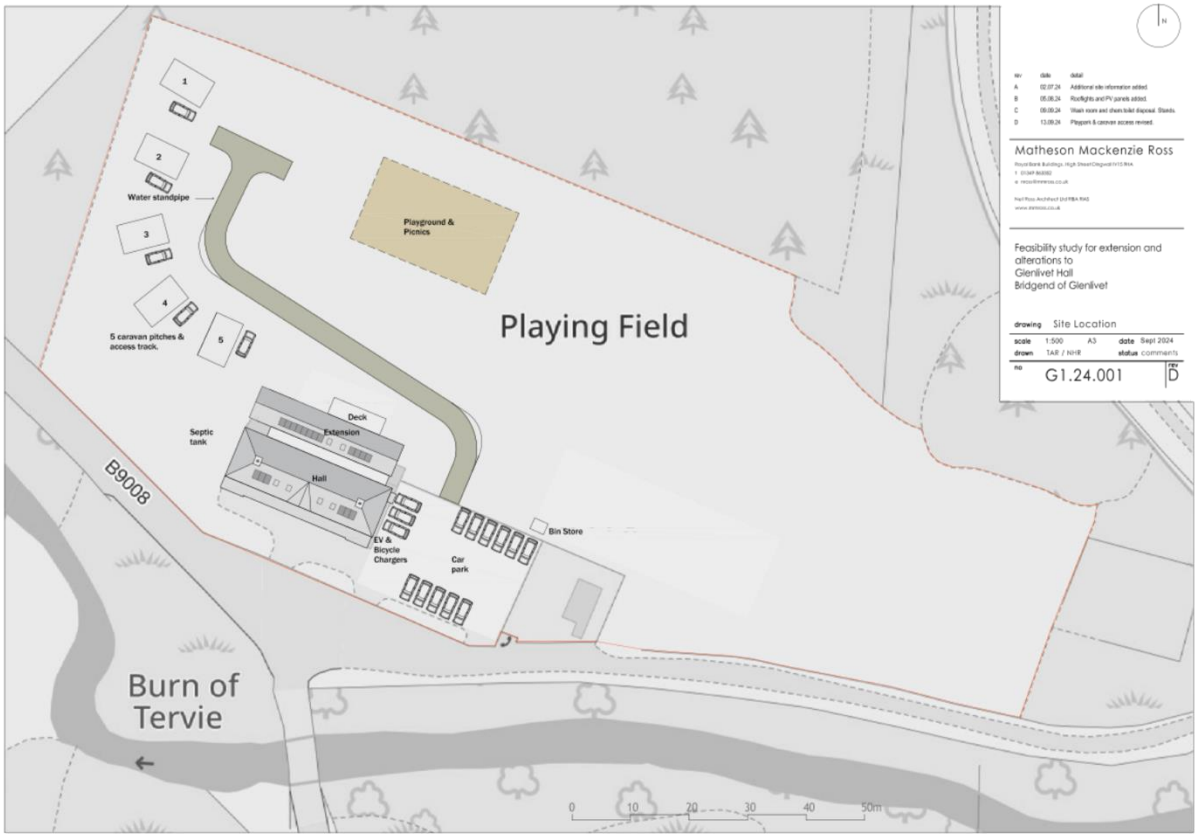
Charging Units	• Basic e-bike charging points cost between £300 and £1,000 per unit, depending on features like weatherproofing, user interfaces, and smart capabilities.
Electrical Installation	• The cost to connect the chargers to the electrical grid, including wiring, circuit breakers, and load management systems, typically ranges from £500 to £2,000 depending on site conditions and proximity to the power supply.
Site Preparation	• This includes installing bike racks or shelter, and any groundwork or construction needed to mount the stations. This would cost between £500 and £2,000, depending on the complexity.
Monitoring, Payment, and Smart Systems	• If smart systems or payment facilities are included, this may cost between £500 and £1,500 for software integration and communication equipment.

The following table demonstrates the potential income that might be generated through E-Bike charging stations. The revenue generated from e-bike charging points will depend on the usage rates, charging fees, and the number of users.

	Per Bike	Per Week (10 Bikes)	Per Year (520 bikes)
Charging Income (based on 50p / kwh	£1.50	£15	£780
Cost (based on 0.5 kWh at 20p)	£0.10	£1	£52
Net Revenue	£1.40	£14	£728

10.2 Examples / Design Work

The drawing below shows a proposed new indicative layout with the spacing between caravans being drawn to scale.



10.3 Capital Costs

Caravan & EV Charger Work	
5 x Hardstanding & Access Road	£50,000
1 x Stand Pipe	£3,000
Signage	£1,000
Bike Chargers (x 3)	£3,600
Electric Vehicle Chargers (x 2)	£4,000
VAT	£12,320
Total	**£73,920**

11 Priority 4: Extended & Enhanced Kitchen

11.1 Overview & Context

At the site visit, and through the community consultation, it was suggested that an extension to the kitchen would support events such as “Tea In The Park” as well as better providing for private hires and social events. It is also noted that the expansion of the kitchen is included within the larger hall extension plan, and could potentially be delivered as a discrete stand-alone project where funding permits.

It is noted that investment into the kitchen has recently resulted in the purchase of new equipment and improved work space, however the general feedback suggests that the circulation space for working is limited. The existing hall layout provides several toilet facilities, and it has been suggested that the toilets close to the kitchen could be removed to create additional work space or storage.

11.2 Options / Design Work



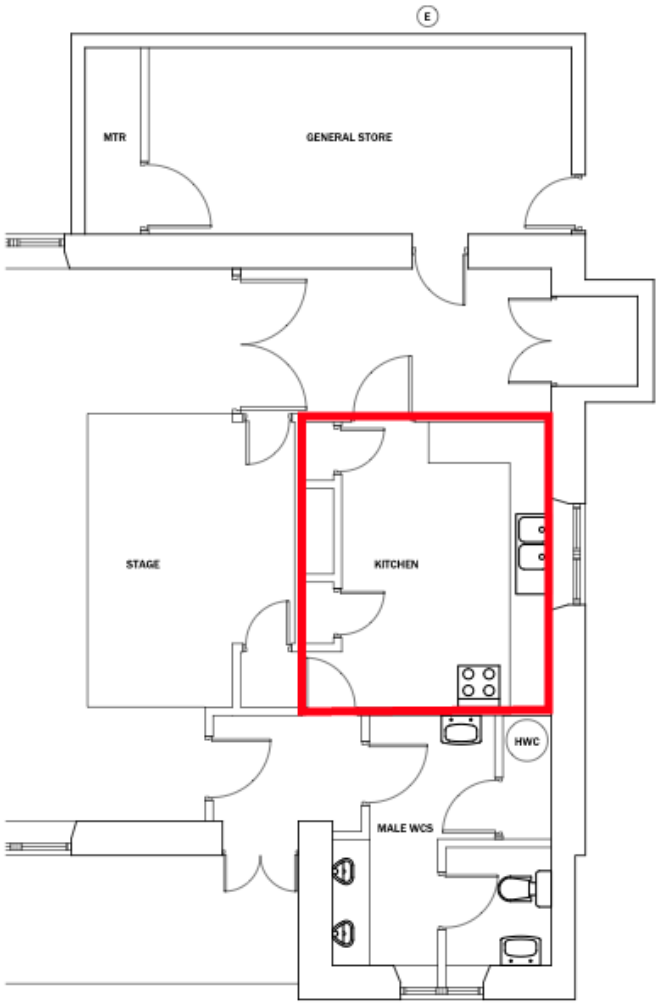
Existing kitchen space



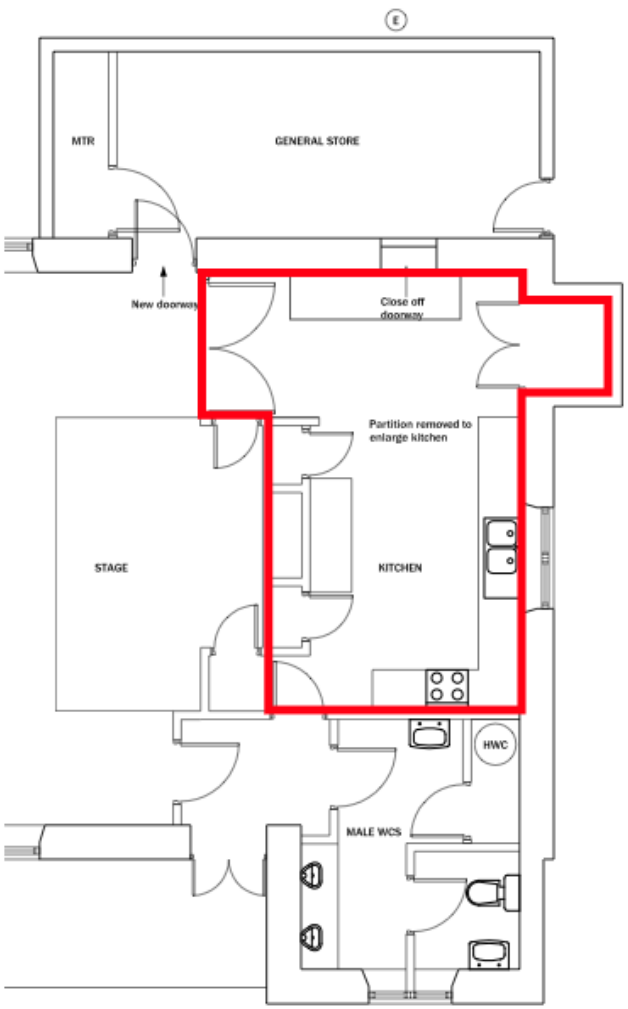
Example Space – Garve Hall

The layouts on the following page show the current small kitchen space, and two options for internal reconfiguration. The second of these options matches the proposed layout for the larger hall development plan.

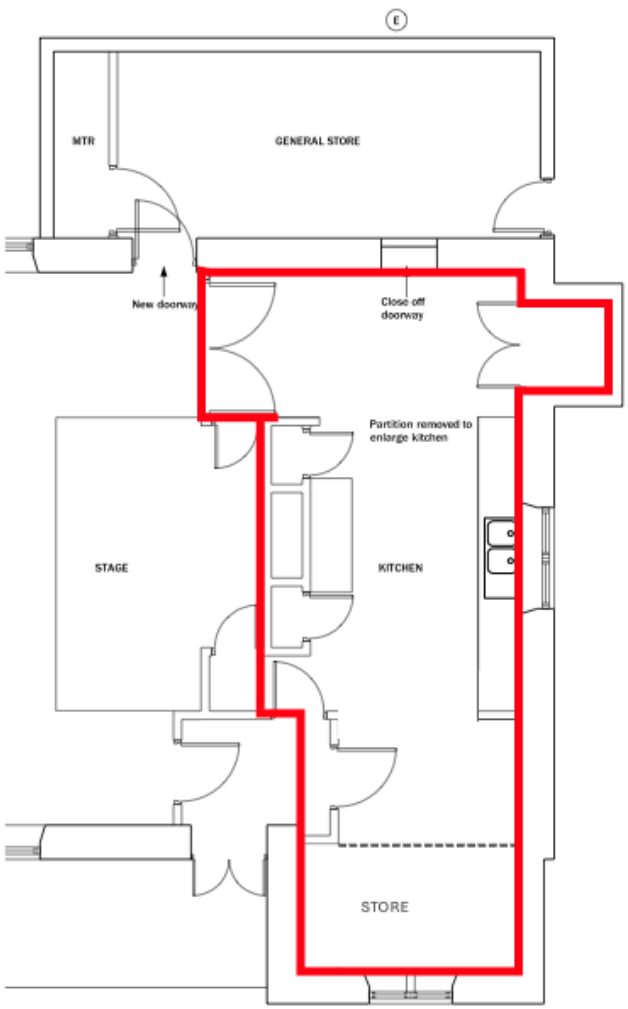
Existing Kitchen Space



Moderate Refurbishment Option



Large Refurbishment Option



11.3 Capital Costs

Element	Moderate Refurbishment	Large Refurbishment
Removal of Existing Walls & Associated Joinery / Decorative Work	£5,000	£20,000
Supply & Install additional kitchen units	£5,000	£5,000
Supply & install additional kitchen equipment	£2,000	£2,000
	£12,000	£27,000
VAT	£2,400	£5,400
Total	**£14,400**	**£32,400**

12 Priority 5: Improvements to the Outdoor Play

12.1 Overview & Context

Throughout the engagement for this project, there has been a strong desire to see increased and improved play provision for all age groups on the site, enhancing the space for local residents, hall users, and those staying on the caravan pitches.

A study led by the University of Exeter asked parents how often their children engaged in play that was "thrilling and exciting," where they might experience some fear and uncertainty[1]. The study, published in *Child Psychiatry and Human Development*, comes at a time when today's children have fewer opportunities for adventurous play out of sight of adults, such as climbing trees, riding bikes, jumping from high surfaces, or playing somewhere where they are out of adult sight.

Throughout this work, there was a clear desire to ensure that any new play provision in complementary to that offered at the school, where recent investment has been made in modern play provision, as shown in the pictures below:





[1] 'Child's Play: Examining the Association Between Time Spent Playing and Child Mental Health', published in *Child Psychiatry and Human Development*

12.2 Options / Design Work

Three play companies were contacted as part of this report – Jupiter Play, Timber Play and Proludic. Each were engaged to provide ideas and indicative costs for supplying and installing innovative new play equipment.

The local school children's views were sought on which items they felt would best meet their needs. These are highlighted in the concept layouts.

The following concept images have been developed to show how new play items might sit on the site:







12.3 Capital Costs

Children's Play & Picnic Area			
Supply & Install Play Equipment			£100,000.00
Picnic Benches			£5,000.00
Net			£105,000.00
VAT			£21,000.00
Total			**£126,000.00**

13 Priority 6 Hall Extension

13.1 Overview & Context

Discussions were held around the need for additional multifunctional spaces at the hall, as the current meeting room is too small and the main hall too large for certain events, classes, and workspaces. A potential solution considered was reconfiguring and expanding the hall with a wraparound extension, which will be part of a larger study.

The Saturday social, once a popular event, has seen a decline in attendance since the pandemic, with previous numbers around 14. However, it was noted that the meeting room did not foster a "pub-like" atmosphere, contributing to the drop in participation.

The bar, an important feature for various events, was agreed to be essential in the expansion plans, though it could be reimagined as part of a larger, more functional multipurpose space. A third smaller space might also be added for workspace or office use.

It was noted that the potential to add an extension to the hall would be welcome, but throughout the process, and as emphasised in the community engagement, it was noted that this was a longer-term ambition and would be led by the availability of funding.

13.2 Options / Design Work

Below is a range of similar hall upgrades which has in turn helped to inform the architect's suggested proposals for Glenlivet Hall extension.



TRADITIONAL FORM



NEW + OLD



CANOPY OVER OUTDOOR DECK



NATURAL LIGHT ALONG CONNECTING CORRIDOR

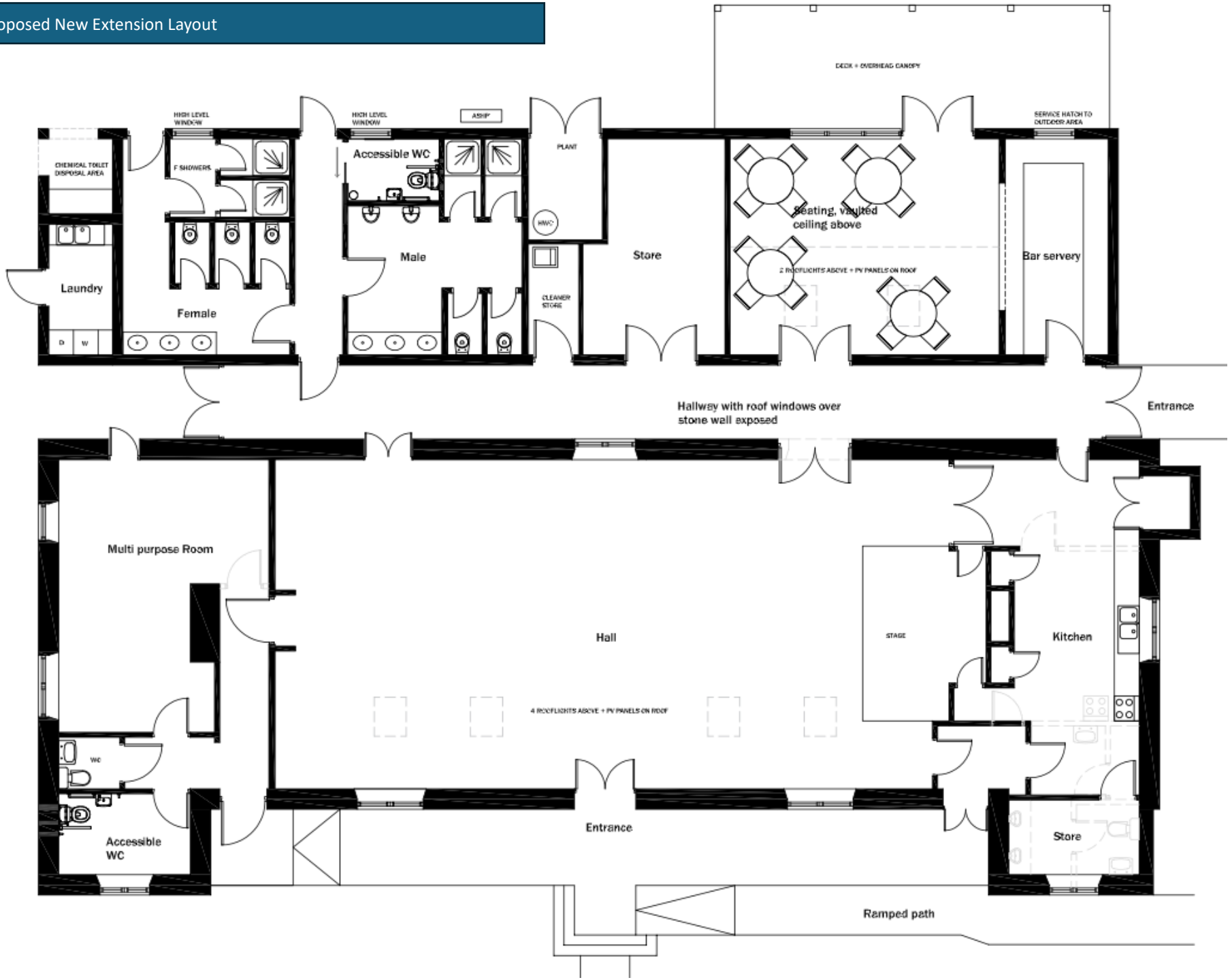


OUTDOOR DECK LOOKING INTO SEATING AREA

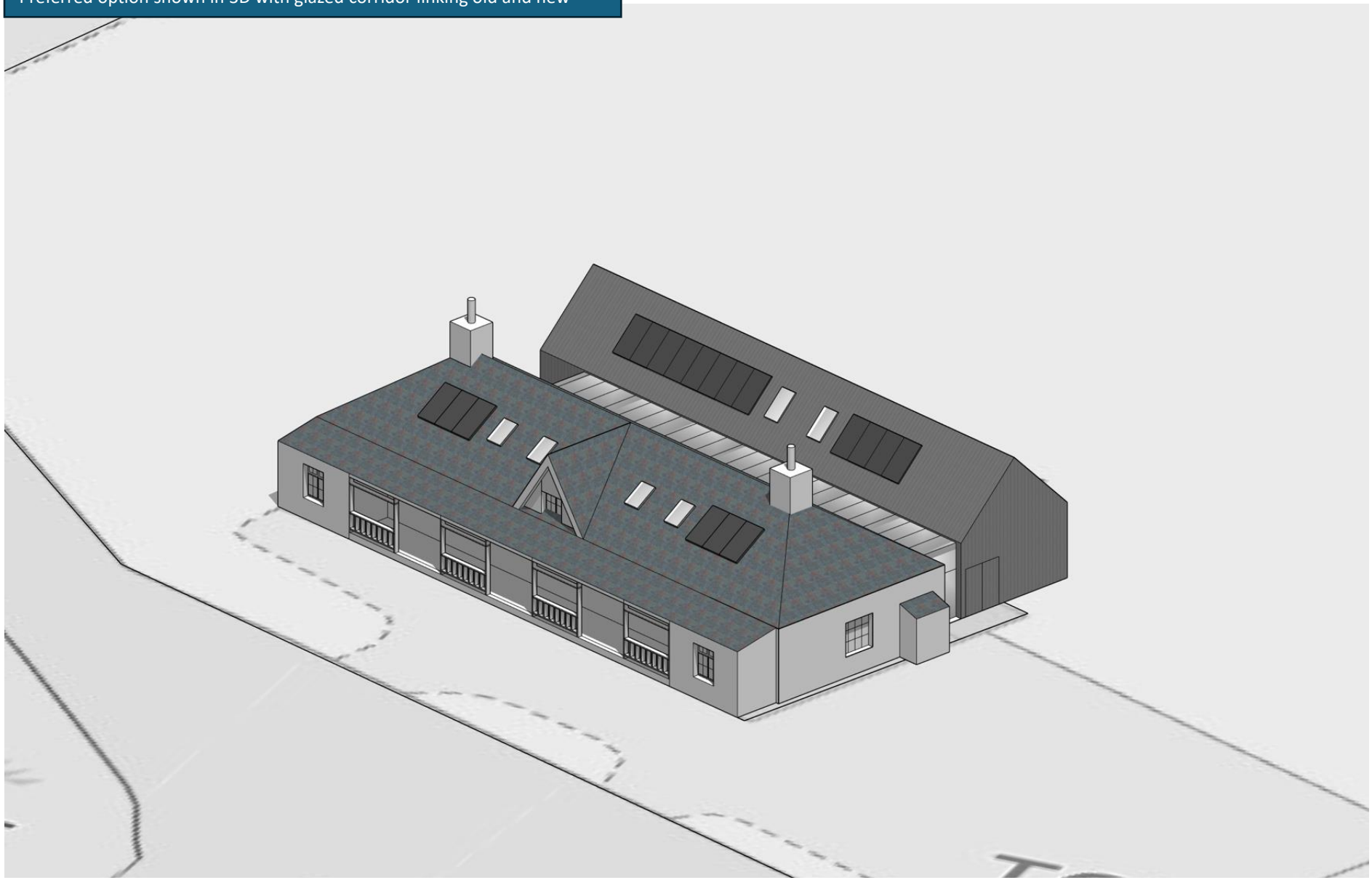


INTERNAL FEEL OF SEATING AREA

Proposed New Extension Layout



Preferred option shown in 3D with glazed corridor linking old and new



13.3 Capital Costs

Element		Cost
Construction GFA (sq. meters)		230
Per sq/m Cost		£3,000.00
Cost Modelling Estimate (Sports / Recreational Centres)*		£690,000.00
Building works value adjustment index*	1.02	£703,800.00
Locational Variation Factor (Scotland Mainland)*	0.98	£689,724.00
Tender Price Index Adjustment (2024-2025)*	3.18%	£21,933.22
Construction Inflation Adjustment (2025-2026)*	1.46%	£10,069.97
		£721,727.19
Allowance for External Works	5%	£36,086.36
Allowance for Risk / Contingency	5%	£36,086.36
		£793,899.91
Fees	5%	£39,695.00
Internal Fittings & Fixtures - Furnishings		£10,000.00
Net Cost		**£843,594.91**
VAT		£168,718.98
Total Project Cost		**£1,012,313.89**

Taking recent works on Garve Hall as a comparator, the overall works were delivered for approximately £3,600m^2 excluding VAT, compared to £3,670m^2 above.

14 Summary of Capital Costs

The following summary outlines the proposed and indicative capital costs included within this report. These have been listed by priority. All costs at this stage are indicative, determined from quotes, estimates and cost modelling software. More detailed pricing will be determined through the appropriate procurement process:

Priority 1: Existing Hall Insulation

Element	Cost	Qty.	Price
Fixed Skylight 750x900mm	£1,104	4	£4,418
Rain Sensor & Remote	£250	4	£1,000
Ritec Easy Clean Finish	£151	4	£604
Solar Controlled Glass	£224	4	£896
Triple Glazing	£513	4	£2,052
Installation	Estimate		£2,500
VAT	20%		
Total Costs			

Insulation / Improvement	Costs
Internal Walls	£39,600
Comb Ceiling Insulation	£14,850
Horizontal Ceilings	£3,750
VAT 20%	£11,640
Total Costs	**£69,840**

Priority 2: Improved Energy & Heating Systems

Item	Details	Costs
Solal Photovoltaic Pannels	28 Pannels – Roof & Ground Mounted	£21,776
Heating Systems	Electrorad Heating System	£25,000
VAT (on heating system only)	20%	£5,000
Total Costs		**£51,776**

Priority 3: Caravan Pitches and Car & Bike Charging Stations

Caravan & EV Charger Work	
5 x Hardstanding & Access Road	£50,000
1 x Stand Pipe	£3,000
Signage	£1,000
Bike Chargers (x 3)	£3,600
Electric Vehicle Chargers (x 2)	£4,000
VAT	£12,320
Total	**£73,920**

Priority 4: Extended & Enhanced Kitchen

Element	Moderate Refurbishment	Large Refurbishment
Removal of Existing Wall & Associated Joinery / Decorative Work	£5,000	£20,000
Supply & Install additional kitchen units	£5,000	£5,000
Supply & install additional kitchen equipment	£2,000	£2,000
	£12,000	£27,000
VAT	£2,400	£5,400
Total	**£14,400**	**£32,400**

Priority 5: Improvements to the Outdoor Play

Children's Play & Picnic Area			
Supply & Install Play Equipment			£100,000.00
Picnic Benches			£5,000.00
Net			£105,000.00
VAT			£21,000.00
Total			**£126,000.00**

Priority 6: Hall Extension

Item	Details	Costs
Construction GFA (sq. meters)		230
Per sq./m Cost		£3,000.00
Cost Modelling Estimate (Sports / Recreational Centres)*		£690,000.00
Building works value adjustment index*	1.02	£703,800.00
Locational Variation Factor (Scotland Mainland)*	0.98	£689,724.00
Tender Price Index Adjustment (2024-2025)*	3.18%	£21,933.22
Construction Inflation Adjustment (2025-2026)*	1.46%	£10,069.97
		£721,727.19
Allowance for External Works	5%	£36,086.36
Allowance for Risk / Contingency	5%	£36,086.36
		£793,899.91
Fees	5%	£39,695.00
Internal Fittings & Fixtures - Furnishings		£10,000.00
Net Cost		**£843,594.91**
VAT		£168,718.98
Total Project Cost		**£1,012,313.89**

15 Potential Sources of Funding

UK Shared Prosperity Fund (UKSPF)

The UK Shared Prosperity Fund (UKSPF) is a central pillar of the UK Government's ambitious Levelling Up agenda. It is a significant component of its support for places across the UK. It provides £2.6 billion of new funding for local investment by March 2025. The primary goal is to build pride in place and increase life chances across the UK.

Underlying this goal are three investment priorities:

1. Communities and place - Investment in activities that enhance physical, cultural, and social ties and access to amenities, such as:
   - community infrastructure
   - local green space
   - innovative approaches to crime prevention

2. Supporting local business
   - investment in business support and entrepreneurship programmes
   - local retail, hospitality, and leisure facilities
   - productivity-enhancing, energy efficient and low carbon technologies in collaboration with the private sector

3. People and skills
   - investment in measures to enable adults to join and progress within the labour market.
   - boosting their core skills through support for qualifications
   - training and to overcome barriers to work.

Further information is available in the UK Shared Prosperity Fund Prospectus

EDF Renewables Dorenell Funding

The EDF Renewables Dorenell Wind Farm Community Benefit Fund supports charitable activities benefiting residents in Dufftown, Auchindoun, Glenrinnes, Glenlivet, Inveravon, and Cabrach. Established in April 2019, the fund receives annual donations from EDF Renewables, starting with approximately £447,000 in its first year.

Each of the four community associations—Cabrach Community Association, Dufftown and District Community Association, Glenlivet & Inveravon Community Association, and Glenrinnes Community Centre—receives 20% of the annual donation to support local projects. The remaining 20% is allocated to initiatives benefiting all four communities.

The fund focuses on five key themes:

- **Environment and Heritage**: Projects enhancing walking and cycling networks, preserving cultural heritage, and improving village aesthetics.
- **Community and Recreational Facilities, Groups, and Activities**: Support for community halls, recreational facilities, youth opportunities, and community development.
- **Local Economy**: Initiatives promoting enterprise, improving ICT access, boosting tourism, and providing training and skills development.
- **Housing and Sustainable Development**: Efforts to address housing needs and support the transition to net-zero emissions.
- **Transport and Access to Services**: Projects enhancing transport options, childcare services, and support for vulnerable populations.

These funds are available for community-led projects that align with the identified themes and priorities.

Let's Do Net Zero Community Buildings Fund

The Scottish Government's Community and Renewable Energy Scheme (CARES) is available to support communities to engage with, participate in and benefit from the energy transition to net zero emissions.

The new Let's Do Net Zero Community Buildings Fund under CARES will help community organisations reduce their building energy costs and greenhouse gas emissions by installing renewable technologies such as heat pumps. The fund opened in May 2022 and is planned to run until the end of March 2025, subject to funding availability.

Funding is available for many types of self-managed community buildings, including:

- Village halls
- Community centres
- Community hubs
- Sports facilities
- Faith buildings

Applicants must be constituted non-profit distributing community organisations, including organisations with charitable status, that are established and operating across a geographically defined community or faith groups. Some common community organisation structures include:

- Scottish Charitable Incorporated Organisations (SCIO)
- Private Companies Limited by Guarantee (CLG)
- Community Benefit Societies (BenCom)
- Community Interest Companies (CIC)

Organisations that are constituted but unincorporated may also apply but must provide additional information.

Grant funding is available for up to 80% of eligible costs up to a maximum of £80,000. The inclusion or exclusion of VAT in CARES funding offers does not alter the grant maximum of £80,000.

Projects require key reports and documents, with 12 months for completion following grant approval.

The Highlands and Islands Enterprise (HIE) Green Grant Fund

The Highlands and Islands Enterprise (HIE) Green Grant Fund provides non-repayable grants up to £250,000 to support businesses and social enterprises transitioning to net zero. Eligible projects can cover 10% to 50% of total costs, depending on location and financial need. The fund prioritizes projects reducing carbon emissions through energy efficiency, renewable energy, and waste management. Applications must demonstrate prior trading activity, employ a minimum number of staff, and undergo a carbon baselining exercise.

For more details, visit HIE Green Grant Fund.
https://www.hie.co.uk/support/browse-all-support-services/greengrantfund/

SSEN Transmission Regional Fund

SSEN Transmission has created the Regional Fund as part of its community benefit commitment from its investment in Transmission infrastructure across its network area in the north of Scotland. The aim of this funding is to bring positive benefits and a long-lasting legacy to communities across the north of Scotland. The fund reflects SSEN Transmission's planned £20bn investment in the transmission network by 2030.

In this round the fund is worth a total of £2,000,000. Applicants can apply for funding from £40,000 up to £500,000. Timescales for this fund are as follows:

- First round opens: Sunday 1 September 2024
- Deadline for applications: Friday 22 November 2024
- Awards made: January 2025

Based on the feedback from the consultation held in 2023, the fund is to be used to provide support for strategic projects in the region and any successful application must meet one or more of the following themes:

- People: Focusing on skills, training and employability.
- Place: Emphasising the community and culture of the north of Scotland; and
- Alleviating fuel poverty: Looking at strategic ways to help people across the region.

These themes should be reviewed in the context of a strategic fund, with the view of maximising impact to the north of Scotland. For example, 'Place' can refer to the physical environment or the wider cultural identity of a community, which may include arts and language.

Moray Council - Place Based Investment Fund

Place Based Investment Fund 2024/25 and 2025/26 committed in full. This may reopen in the future providing a potential source of funding.

Local Business Support – Distilleries

Approaching local distilleries may be an option, particularly given that Glenlivet Distillery were the company that gifted the hall to the community almost 100 years ago. Other distilleries have a track record of making one off capital contributions. For examples Glenmorangie made a one-off donation of £300,000 to South Islay Community Development Trust from their local distillery.

16 Recommendations

In concluding the work, the following recommendations are made:

Phase One

1. It is recommended that ceiling and wall insulation is installed throughout the existing hall in line with the specifications noted in this report.
2. It is recommended that the four roof light windows are replaced with new, improved double glazed sky lights similar to those shown in this report.
3. It is recommended that solar photovoltaic panels are installed on site. This could be on the existing south facing roof, supplemented by ground mounted panels to generate electricity and reduce the overall operating costs.
4. It is recommended that, after the first full year following the above improvements, the running costs should be reviewed. Depending on these savings, a decision should be made on the need for a new heating system. If this is required, this report concludes that a new electrorad heating system be installed.
5. It is recommended that the group consider the options for reconfiguring the existing kitchen and toilet provision on the east end of the building to create a larger kitchen space.

Phase Two

6. It is recommended that consideration be given to creating five new caravan / campervan pitches with electric hook up, access to water supply, and associated amenity facilities.
7. It is recommended that consideration be given to installing electric vehicle and electric bike charging points on site.

Phase Three

8. It is recommended that the hall committee consider the installation of new children's play equipment, benches and a BBQ area.

Phase Four

9. It is recognised that there is an ambition for a larger hall extension project, however this report highlights a lack of sufficient available capital funding. It is recommended that the hall committee keep a watching brief on new funding opportunities, and where appropriate, progress the proposed extension when circumstances permit.

17 Appendices

17.1 Appendix One: Letters of Support

The Scottish Parliament
Pàrlamaid na h-Alba

Tim Eagle MSP
MSP for Highlands and Islands Region

Sent by email **29/10/2024**

To Whom it may concern,

I am delighted to write this letter of support for Glenlivet Public Hall. It is always good to hear of community led plans to develop local assets for the good of the local area and businesses.

Glenlivet Public Hall is already a brilliant space for the community. It plays an important role in the bringing local people together and is a stellar example of how such centres can inspire a real feeling of local pride.

Based on the proposals, to upgrade the heating system, provide long term financial security by providing hardstanding for visiting caravans and motorhomes, expansion of the kitchen, an outdoor play area and an extension to the hall this refurbishment will help to ensure the longevity of the hall and allow it to grow.

Having read through the proposals, I am more than happy to say that I am in full support of these efforts.

Please let me know if I can provide my support in any other way.

Yours sincerely,

Tim Eagle

Tim Eagle MSP
Member of the Scottish Parliament
Highlands and Islands Region

M2.02, The Scottish Parliament, Edinburgh, EH99 1SP
Tim.Eagle.msp@parliament.scot

To Whom It May Concern.

In my role as Moray Councillor for Speyside/Glenlivet I have first-hand experience of the part Glenlivet Hall plays in life of the community.

Meeting room, tearoom, bar, dance hall, bingo hall, badminton court, theatre.

It is all these things and many more. The hall is the beating heart of life in Glenlivet.

One of the highlights of my year is volunteering at The Tea in the Park community charity event and I have witnessed the esteem in which the Hall is held.

I have pleasure in endorsing the proposed improvements to this vital community space.

Kind regards,

Derek Ross

Councillor

Ward 1 Speyside Glenlivet

07980898682

derek.ross@moray.gov.uk

The Moray Council

The Scottish Parliament
Pàrlamaid na h-Alba

Ariane Burgess
MSP for the Highlands and Islands Region
The Scottish Parliament,
Edinburgh, EH99 1SP
Ariane.Burgess.MSP@Parliament.Scot

12/11/2024

To whom it may concern,

Letter of Support for the Proposed Refurbishment of Glenlivet Public Hall

I am writing to express my full support for the proposed refurbishment of Glenlivet Public Hall. As a Member of the Scottish Parliament for the Highlands and Islands region, I am acutely aware of the vital role that Glenlivet Hall plays in Moray. The hall is not only a venue for a wide range of events, including theatre performances, weddings, and the renowned Tea In The Park community cafe and craft fair, but it also serves as a cornerstone for community engagement and local initiatives.

The proposed improvements, which include affordable and efficient heating, outdoor provision of hardstanding caravan spaces, internal expansion of the kitchen, an outdoor play area, and an extension to the hall, are essential for enhancing the functionality and sustainability of this cherished community asset. These upgrades will ensure that Glenlivet Hall can continue to meet the evolving needs of our community, providing a welcoming and versatile space for all.

The feasibility study conducted by Alan Jones and Associates has clearly outlined the priorities and potential benefits of these refurbishments. I understand the community consultation has shown widespread support for these plans, reflecting the collective desire to see Glenlivet Hall thrive and continue to serve as a hub for local activities and events.

I wholeheartedly support this initiative and urge all relevant stakeholders to provide the necessary backing to bring these plans to fruition. The refurbishment of Glenlivet Hall will undoubtedly have a positive and lasting impact on our community.

Thank you for your attention to this important matter. Please do not hesitate to contact me if you require any further assistance or information.

ind regards,

Ariane Burgess

Ariane Burgess MSP

17.2 Appendix Two: Comparative Assessment of Insulation Types

Roof Insulation

Fiberglass or Mineral Wool Batts - Rolls or batts of fiberglass or mineral wool are laid between the joists in the roof space	
Advantages- Cost-effective, easy to install, and widely available. These materials provide good thermal insulation and can also help with soundproofing.	**Disadvantages** - Can be less effective if not installed correctly, leaving gaps or compressed areas that reduce insulation efficiency. Also, mineral wool can be irritating to handle without proper protection.

Loose-Fill Insulation (Cellulose or Fiberglass) - Loose-fill insulation made of cellulose (often recycled paper) or fiberglass is blown into the roof cavity.	
Advantages - Ideal for filling irregular or hard-to-reach spaces. It provides good coverage and can be installed over existing insulation if needed.	**Disadvantages** - Can settle over time, reducing its effectiveness unless topped up. It requires professional installation for even distribution.

Spray Foam Insulation - Spray foam expands upon application to fill gaps and cracks, offering a tight seal.	
Advantages - Provides superior insulation by creating an airtight barrier, preventing drafts and reducing heat loss. It also adds structural stability.	**Disadvantages** - More expensive and typically requires professional installation. It may also be difficult to remove if future adjustments or repairs to the roof are necessary.

Rigid Foam Insulation - Rigid foam boards are fitted between roof rafters or laid across them to provide a solid insulation layer.	
Advantages - Offers excellent thermal resistance and can be used in conjunction with other insulation types for greater efficiency. It is durable and long-lasting	**Disadvantages** - More costly than traditional fiberglass batts and can be difficult to install in irregular spaces without cutting to size.

Reflective or Radiant Barrier Insulation - Thin reflective material, usually aluminium foil, is installed to reflect heat rather than absorb it.	
Advantages - Particularly effective in warmer climates to reduce heat gain through the roof. It can be combined with other insulation types for additional energy savings.	**Disadvantages** - Less effective in cold climates as it does not provide much thermal resistance on its own. It is mainly useful for reflecting radiant heat.

Wall Insulation

Batt Insulation - Typically made from fiberglass or mineral wool. Cut to fit between wall studs; effective for standard wall cavities.	
Advantages - Cost-effective, good thermal performance.	**Disadvantages** - Can be less effective if not installed properly; may be less effective in damp areas.

Spray Foam Insulation - Expands on application, made from polyurethane. Sprayed into wall cavities; can also seal gaps.	
Advantages - High R-value per inch, excellent air sealing, moisture barrier.	**Disadvantages** - More expensive; requires professional installation.

Rigid Foam Board Insulation- Made from polystyrene, polyisocyanurate, or XPS, cut to size and installed on walls; can be used for exterior insulation as well.	
Advantages - High insulating value, moisture resistant, can be used in various applications.	**Disadvantages** - Higher initial cost; can be less effective for soundproofing.

Mineral Wool (Rock Wool) Insulation - Made from natural or recycled materials, such as stone or slag. Comes in batts or can be blown in.	
Advantages - Fire resistant, soundproofing properties, moisture resistant.	**Disadvantages** - Can be more expensive than fiberglass; requires careful handling.

Reflective or Radiant Barrier Insulation - Foil or reflective material installed in attics or walls facing radiant heat sources.	
Advantages - Effective in hot climates; reduces cooling costs	**Disadvantages** - Less effective in colder climates; works best when properly ventilated.

Insulated Wall Panels - Prefabricated panels with insulation built-in mounted directly to wall framing or existing walls	
Advantages - Quick installation, effective for energy efficiency.	**Disadvantages** - L Higher upfront cost; limited design flexibility.

Floor Insulation

Rigid Foam Boards (PIR/Polyurethane or Polystyrene Boards) - High-performance insulation boards made from polyisocyanurate (PIR), polyurethane, or polystyrene.	
Advantages • Excellent thermal performance. • Thin, allowing for more floor space. • Can be installed below a new concrete slab or under timber floors. • Best for buildings with suspended timber floors or where floor height can be increased.	**Disadvantages** • More expensive compared to some other options. • Requires a vapor barrier to prevent moisture penetration.

Mineral Wool (Rockwool or Fiberglass Insulation) - Flexible batt or roll insulation made from natural stone or recycled materials.	
Advantages • Easy to install between joists in suspended timber floors. • Fire-resistant and offers sound insulation as well as thermal performance. • Breathable, allowing moisture to pass through without condensing. • Best for suspended timber floors where sound and fire protection are important	**Disadvantages** • Needs protection against moisture. • Can be less effective if compacted or poorly installed.

Spray Foam Insulation (Closed-Cell) - Spray-applied foam that expands to fill gaps and provide airtight insulation.	
Advantages	**Disadvantages**

• Excellent for sealing hard-to-reach areas. • Provides both insulation and a moisture barrier. • High R-value per inch, maximizing thermal performance in small spaces. • Best for older buildings with irregular shapes or hard-to-reach areas under the floor.	• Expensive. • Needs professional installation. • Can be hard to remove or alter once applied.

Insulated Floor Panels - Pre-insulated floor panels that combine insulation and structural support**.**	
Advantages • Quick and easy to install. • Combine structural strength with insulation • Best for new builds or major renovations where the floor is being entirely replaced.	**Disadvantages** • More expensive than basic insulation options. • Limited thickness may provide lower insulation value in colder climates.

Reflective Foil Insulation - Thin sheets of foil-faced insulation that reflect heat back into the space	
Advantages • Easy to install under suspended timber floors. • Lightweight and inexpensive. • Provides a radiant barrier to improve heat retention. • Best for mild climates or as a supplemental layer in combination with other insulation methods.	**Disadvantages** • Less effective in very cold climates. • Usually combined with other insulation materials for better performance

17.3 Appendix Three: Heating Systems

Radiant Heating (Underfloor or Radiator)

Radiant heating is a highly efficient and comfortable method of warming indoor spaces, where heat is transferred directly to floors, walls, or ceilings, rather than through the air. This system works by circulating hot water through pipes (hydronic radiant heating) or using electric heating elements installed beneath surfaces, typically floors. As these surfaces warm up, they radiate heat evenly throughout the room, creating a consistent warmth. One of the key benefits of radiant heating is the lack of air movement, which minimises the circulation of dust and allergens, making it ideal for people with respiratory sensitivities. It also eliminates the temperature fluctuations often found in forced-air systems, offering silent, energy-efficient, and uniform heating. However, installation can be costly, especially in existing buildings, as it often requires retrofitting beneath floors.

Benefits

- Comfort - Provides even heat distribution and is often considered more comfortable than forced air.
- Energy Efficient - Radiant heating systems tend to be more energy efficient, especially in buildings with high ceilings.
- Quiet Operation - Silent operation since there are no moving parts or fans.
- Air Quality - Does not blow air around, which can reduce the circulation of dust and allergens.

Considerations

- Cost - Higher upfront installation cost, especially for underfloor systems.
- Installation Disruption - Retrofitting radiant systems in an existing building can be disruptive.
- Slow Response Time - Takes longer to adjust room temperature than forced air systems.

Air-Source Heat Pumps (Wet System)

Air source heat pumps (ASHPs) are an efficient heating and cooling solution that works by extracting heat from the outside air and transferring it indoors during colder months, while reversing the process to cool the interior during warmer months. Even in relatively cold conditions, ASHPs can absorb heat from the air, using a refrigerant system to capture and move thermal energy. These systems are more energy-efficient than traditional electric or fossil-fuel-based heating systems, reducing both energy consumption and carbon emissions. ASHPs are relatively easy to install compared to ground-source heat pumps and can be a cost-effective option, especially in moderate climates. However, their efficiency decreases in extreme cold, which may require supplemental heating in colder weather such as that faced by the hall in Glenlivet. Despite this limitation, advancements in technology have made modern ASHPs increasingly effective even in low temperatures, making them a popular choice for eco-conscious groups.

Benefits

- Energy Efficiency - Heat pumps are extremely energy efficient because they transfer heat rather than generate it, especially ground-source heat pumps (geothermal).
- Environmental Impact - Produces lower carbon emissions compared to fossil fuel-based systems.
- Dual Function -Provides both heating and cooling, reducing the need for separate HVAC systems.

Considerations

- Initial Cost - Ground-source heat pumps are expensive to install due to the need for drilling or excavation.
- Climate Suitability - Air-source heat pumps may be less efficient in very cold climates, although modern models have improved cold-weather performance.
- Maintenance - Requires regular maintenance to maintain efficiency, especially for outdoor units.

• Incentives - Many governments offer rebates or tax credits for installing energy-efficient heat pumps.	

Ground-Source Heat Pump (Wet System)

Ground source heat pumps (GSHPs), also known as geothermal heat pumps, are highly efficient systems that leverage the stable temperatures below the earth's surface to provide heating, cooling, and hot water for buildings. Unlike air source heat pumps, which extract heat from the air, GSHPs use underground pipes filled with a water and antifreeze mixture to absorb heat from the ground. In the winter, the system draws heat from the earth and transfers it indoors, while in the summer, it can reverse the process to cool the building by releasing heat back into the ground. Since ground temperatures remain relatively constant year-round, GSHPs are more efficient and reliable than air-based systems, especially in extreme climates. Though initial installation can be costly due to the need for underground piping, GSHPs offer long-term energy savings, lower operational costs, and reduced carbon footprints, making them an excellent sustainable heating and cooling solution.

Benefits	**Considerations**
• Energy Efficiency - Heat pumps are extremely energy efficient because they transfer heat rather than generate it, especially ground-source heat pumps (geothermal). • Environmental Impact - Produces lower carbon emissions compared to fossil fuel-based systems. • Dual Function -Provides both heating and cooling, reducing the need for separate HVAC systems. • Incentives - Many governments offer rebates or tax credits for installing energy-efficient heat pumps.	• Initial Cost - Ground-source heat pumps are expensive to install due to the need for drilling or excavation. • Climate Suitability - Air-source heat pumps may be less efficient in very cold climates, although modern models have improved cold-weather performance. • Maintenance - Requires regular maintenance to maintain efficiency, especially for outdoor units.

Updated Electric Heating Systems

Electric heating systems use electricity to generate heat and are a versatile option for heating homes or buildings. These systems work by converting electrical energy into thermal energy through heating elements such as electric baseboards, radiant heaters, or forced-air systems equipped with electric furnaces. Electric heaters are relatively easy to install, require minimal maintenance, and offer precise temperature control through thermostats. They are often considered safer than gas-based systems since there is no risk of carbon monoxide leakage. However, electric heating can be more expensive to operate, especially in regions with high electricity costs. Despite this, electric heating is often favoured in areas where electricity is sourced from renewable energy or for small spaces and supplemental heating due to its convenience and reliability. This may be combined with energy generating systems such as solar panels.

Benefits	**Considerations**
• Simple Installation - Easy to install and inexpensive in terms of upfront costs. • Zoning - Offers excellent control over heating different rooms or areas individually, making it ideal for buildings with fluctuating occupancy.	• Operating Cost - Can be expensive to operate, especially in areas where electricity prices are high. • Environmental Impact - If the electricity is sourced from fossil fuels, the environmental benefits are reduced.

• No Emissions - Does not produce direct emissions, and if paired with renewable energy, it can be a zero-carbon solution.	• Longevity - Electric heating elements can wear out faster than other types of systems.

Biomass Heating Systems (Wood Pellets or Chips)

Biomass heating systems use organic materials like wood pellets, chips, logs, or agricultural waste to produce heat for residential or commercial buildings. These systems operate by burning biomass fuel in a boiler or stove, which then generates heat that can be distributed through radiators, underfloor systems, or hot water circuits. Biomass is considered a renewable energy source since it relies on plant matter that can be regrown, and when sourced sustainably, it can significantly reduce carbon emissions compared to fossil fuels. Additionally, biomass systems can provide both space heating and hot water, making them a versatile option. However, they require regular maintenance, such as ash removal and consistent fuel supply, and storage for the biomass fuel is necessary. While biomass heating systems may have higher upfront costs compared to conventional heating options, they can offer long-term savings, especially in rural areas where wood or agricultural waste is readily available.

Benefits	**Considerations**
• Renewable Energy - Biomass is a renewable energy source, often considered carbon-neutral. • Cost-Effective - Can be cost-effective in areas where wood or biomass fuel is abundant. • Sustainability - Supports local economies and reduces dependency on fossil fuels.	• Storage Space - Requires significant space for storing fuel (wood chips or pellets). • Maintenance - Requires regular maintenance, including ash removal and ensuring the fuel feed system works properly. • Fuel Supply - The reliability of the biomass fuel supply needs to be considered, particularly in urban areas.

Solar Heating (Solar Thermal)

Biomass heating systems use organic materials like wood pellets, chips, logs, or agricultural waste to produce heat for residential or commercial buildings. These systems operate by burning biomass fuel in a boiler or stove, which then generates heat that can be distributed through radiators, underfloor systems, or hot water circuits. Biomass is considered a renewable energy source since it relies on plant matter that can be regrown, and when sourced sustainably, it can significantly reduce carbon emissions compared to fossil fuels. Additionally, biomass systems can provide both space heating and hot water, making them a versatile option. However, they require regular maintenance, such as ash removal and consistent fuel supply, and storage for the biomass fuel is necessary. While biomass heating systems may have higher upfront costs compared to conventional heating options, they can offer long-term savings, especially in rural areas where wood or agricultural waste is readily available.

Benefits	**Considerations**
• Low Operating Cost - Once installed, solar thermal systems have very low operational costs as they harness free solar energy. • Environmentally Friendly - Solar heating systems significantly reduce carbon emissions. • Energy Independence - Reduces reliance on external energy sources, providing greater energy security.	• Weather Dependent - Effectiveness depends on sunlight availability, making it less reliable in cloudy or short-day regions. • Initial Investment -High initial cost for installation, especially if integrated into a large-scale public building. • Supplementary System - In most climates, solar heating requires a supplementary system for times when solar energy is insufficient.