Denholm Partnership Architects

Studies to Establish the Viability of the Proposed Location for the Replacement St Fillans Village Hall

St Fillans Community Trust,
1 Dundurn Walk,
St Fillans,
By Crieff,
Perth & Kinross,
PH6 2NA

REPORT ON OUTCOMES

DENHOLM
PARTNERSHIP
ARCHITECTS

3rd March 2022

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Appendix

1. SCOPE OF WORKS

We were required to appoint and supervise various studies to establish the viability of the proposed location for the Replacement St Fillans Village Hall on the site known locally as the War Memorial Site which lies at the east end of Loch Earn and to the south of the River Earn. Studies are required to be carried out by by persons/firms who are suitably qualified and experienced to provide required expert opinion and written reports.

a. **Prepare a topographical survey** with 2D and 3D digital data and photographs.
b. **Prepare a Flood Risk Assessment** and Report including flow estimation and flood modelling to meet SEPA and Perth and Kinross Flood Team requirements.
c. **Prepare a Drainage Strategy Report** and Drainage Impact Statement to investigate options and feasibility for both foul drainage and SUDS for the proposed site and sufficiently developed to satisfy PKC that the site can be effectively drained and in accordance with current PKC requirements
d. **Prepare a Transport Assessment** in accordance with current Perth and Kinross Council and Traffic Scotland requirements including Scoping, Traffic Surveys and Traffic Baseline and Access Appraisal
e. **Ecological Surveys**. Carry out a Preliminary Ecological Appraisal survey and prepare a Preliminary Ecological Appraisal Report of the site including Phase 1 habitat survey as required for relevant species including bats and beavers and consideration of protected species and identification of any invasive plants.
f. **Carry out Tree Survey** and prepare a Tree Report in accordance with BS5837:2012.
g. **Carry out an Archaeological Assessment** to establish likelihood of archaeological remains that may be impacted by proposals to develop the site.
h. **Carry out check for available services** and location of services.
i. **Health & Safety** High level and preliminary review of potential hazards / risks in relation to design, construction and use of a new Hall facility on the site.
j. **Reporting Outcomes** Provide all above reports and findings to the St Fillans Community Trust for future use by the Trust or its representatives and provide a summary of these reports highlighting key findings. Adverse or problematic findings should be accompanied by suggestion(s) as to how, going forward, these might be overcome (if feasible).

2. LIST OF SUB CONTRACTORS / CONSULTANTS

Work Element	Name & Address of Sub Contractor
Topographical Survey	Mr Steve Dickson Douglas Land Surveys Land and Hydrographic Surveyors Agra House Newport-on-Tay 15 King Street Fife DD6 8BN steve@douglaslandsurveys.co.uk
Flood Risk Assessment	Brian Coghlan Atholl Associates Algo Business Centre Glenearn Road Perth PH2 0NJ brian@athollassociates.co.uk
Drainage Strategy	Brian Coghlan Atholl Associates Algo Business Centre Glenearn Road Perth PH2 0NJ brian@athollassociates.co.uk
Transport Assessment	Mr Myles McGregor McGregor Traffic Solutions 32 Barn Place Livingstone EH54 7EN mcgregortraffic@outlook.com
Preliminary Ecological Assessment	Andrea Hudspeth Aquila Ecology Cruachan St Fillans Crieff Perthshire PH6 2NQ andrea@aquilaecologyscotland.co.uk
Tree Survey	Mr Alan Motion Alan R Motion Fairlie House Main Street Buchlyvie FK8 3LX alan@alanmotion.co.uk

Archaeological Assessment	Mr David Bowler Alder Archaeology 55 South Methven Street PERTH PH1 5NX director@alderarchaeology.co.uk
Availability of Services	Rod Paul Denholm Partnership Architects 11 Dunira Street Comrie Perthshire PH6 2LJ rod@james-denholm.co.uk
Health & Safety Review	Rod Paul Denholm Partnership Architects 11 Dunira Street Comrie Perthshire PH6 2LJ rod@james-denholm.co.uk

3. SUB CONTRACTOR / CONSULTANTS CONCLUSIONS AND FINDINGS

3.1 Topographical Survey

All necessary data was gathered during the survey. The site has a few notable features which may have a potential impact on the proposals:

- Contours and levels across the site have been established. Within the site, there is a variation of level from a low point of 97.31 to a high point of 101.02 . Current loch edge level was approx. 96.50 with a high water level of approx. 98.40. These levels are approximately the same as the levels at the bank of the River Earn to the east end of the site.
- There is a steep bank along the southern boundary where the site rises up to meet the South Lochearn Road. This has an impact on proposals for vehicular access the site from the existing road to the south.
- The central area of the site is raised above the general level with ground rising on a gentle slope to the high point. This raised area is where the proposed building has been shown on the initial draft block plan and this would seem like the optimum location in relation to site levels and flood potential.
- The existing access from the East drops from the gate down to a level of approx. 97.37 before rising back up to follow the gentle slope to the highpoint of the site. This channel facilitates fere movement of flood waters across the site to the river on the east side of the site and should be retained.
- There is a naturally formed pond at the southern edge of the site at the bottom of the bank. This has a potential impact on the possible site layout and location of access and parking.
- Tree positions are clearly identified. This helps to inform the possible location for buildings, access, parking and other facilities.
- The river bank is very close to the existing access at the east end of the site and this has an impact on the feasibility of using the existing access from the East of the site.
- Existing path network connections to the village and within the site located. These should be retained where possible and if not possible should be replaced / rerouted.
- Existing fences and boundaries clearly identified.
- Location of existing War Memorial identified.

3.2 Flood Risk Assessment

- The site will in parts be prone to flooding on occasion. Hence, the proposed building should be sited on the highest part of the site in order to make it as safe as possible.
- There should be a minimum freeboard above predicted flood levels of at least 600mm, relative to the Q200+CC level. Hence, the minimum flood level recommended for the completed building is 101.04m AOD
- The floor level of the buildings should have a suitable upstand above surrounding finished ground levels of at least 300mm, commensurate with good building practice.
- A site-specific Flood Emergency Plan should be developed, and the resulting plan issued to all relevant stakeholders involved with managing the proposed facility.
- As a precaution, buildings should be constructed using water resilient methods and materials.
- The proposed vehicular access should not be raised higher than existing ground levels along the southern flood channel. Also, a new pipe culvert of a similar diameter to the existing one is installed at the access.
- It should be noted that the proposed access will be subject to occasional flooding and should therefore have a reasonably resilient construction.
- In order to avoid any increase in flood risk, surface water runoff generated by the site should be dealt with following the principals of Sustainable Urban Drainage Systems.

- The development of the proposed site will not cause an increase in flood risk to third party property, and that there will be no resultant loss of flood storage.

3.3 Drainage Strategy Report

- The proposed development can be drained satisfactorily if a system based on the design details set out here is constructed.
- Based on the above, the proposals for this development can be supported, as it has been demonstrated that a satisfactory drainage system which meets the requirements of good drainage practice and following the principals of SuDS has been achieved.
- A detailed proposal will have to be verified by the Planning department and Building Standards

3.4 Transport Assessment

- The proposed site is accessible in terms of walking, cycling and public transport.
- Some improvements would be required to the existing footway between the bridge and the site.
- Based on initial high level assessment it is concluded that the level of traffic proposed is unlikely to have a detrimental impact on the operation or safety of the A85 junction or on South Loch Earn Road.
- An access from South Loch Earn Road can meet visibility and geometric criteria with Option 1 (access in the middle of the site) the preferred option in terms of deliverability although some local widening at the junction may be required to fully accommodate vehicle movements.
- The need for the junction to meet the road at perpendicular angle in Option 2 (the existing gate access at the East end of the site) makes this option problematic and the limitations of the river bank make the use of this access point impractical. However, it may be possible to move the junction slightly further to the west to allow space for road edge support and an appropriate road geometry. Levels would need to be adjusted to suit which may present a problem.
- Option 3 (access at the west end of the site) is not achievable; visibility splays are obscured by trees outwith the site and the recommended root protection zones for existing trees that have to be retained on the site do not allow sufficient width for an access to be formed.

3.5 Preliminary Ecological Assessment

- No protected mammals, birds, amphibians or reptiles were recorded during the survey, but it is possible that animals could be hibernating in suitable habitat such as trees, piles of rocks and the old wall.
- The mature trees and standing dead wood have the potential to support bat roosts and nesting birds during the spring and summer.
- The survey was undertaken outside of the breeding bird and bat seasons.
- An absence of evidence does not indicate that a species is absent. Different species are more active at certain times of the year when their field signs are more numerous and can be easier to detect.
- No habitats of international importance were discovered during the survey. The mature trees will be important locally as these habitats are not easily replaced. These trees have high value for a number of bird, mammal and invertebrate species and should be retained as much as possible.
- There was no evidence of protected species using the site at the time of the survey, but further surveys would be required to rule out the presence of bat roosts in the trees with suitable features.
- Recommendations include retaining deadwood on the site or nearby, retaining and possible

enhancement of the pond, retaining mature standing trees, any rocks or walls being moved would ideally relocated on the site or nearby, the existing fence should be retained as it prevents beavers from accessing the site, some new hedge planting would be beneficial.

- A Phase 2 bat survey will be required before any trees are felled. This will likely need to be undertaken at height using rope access.
- A nesting bird survey will also need to be undertaken before any trees can be felled during the breeding bird season, although it is recommended

3.6 Tree Survey Report

- Draft designs have been prepared for the construction of a new village hall, parking, and outdoor activities area. This is provided as part of a feasibility study and is indicative only at this stage.
- Site access will need to be provided from South Loch Earn Road. The presence of trees 6682, 6735, and 6739 will limit potential access options. These trees are of significant size and high amenity value, and will need to be retained.
- The marsh/wetland in the south-west corner will limit the potential for any development within this area.
- There is perhaps some potential for removal of trees along the southern edge of the alder woodland in the north-west part of the site, which would increase potential developable area, without impacting to any significant degree on the screening and amenity that this provides.
- Existing trees along the road verge that are dead or otherwise unsafe will need to be removed, irrespective of any development of the site. However, those dead and dying trees along the north edge of the wetland could be retained for their ecological value if the wetland is retained to its current extent.
- With the use of appropriate construction methods including cellular confinement over tree root systems, it may be possible to provide parking spaces within the canopy spread of retained trees.
- A detailed Tree Protection Plan will be required once designs are finalised.
- The accompanying Tree Constraints Plan provides recommended Construction Exclusion Zones and possible areas where tree removal and/or ground protection measures might provide acceptable space for development.
- The retention of trees 6682, and 6735-6739 must be accommodated.

3.7 Archaeological Assessment Report

- There are no Scheduled Monuments or Listed Buildings within the study area and no Scheduled Monuments nearby.
- There are three listed buildings on the north side of the River Earn and Loch Earn.
- There is no evidence of surviving below-ground archaeology in or near the development site, and less than usual reason to expect it, given the negative evidence of Roy's map, and the inhospitable natural setting of the site, exposed to wind, shade and flooding.
- Taken together as an ensemble, the features in and around the site, in their remarkable natural setting, contribute substantially to the distinctive character of the village as a conservation area.
- It is intended to leave the encircling belt of woodland substantially in place. If this can be done, the impact on the setting of the listed buildings including the War Memorial, and on the conservation area as a whole should be minimal.

- Special care should be taken to maintain the integrity of the woodland belt, as this will play such a large part in screening the development from the village.
- Care should also be taken in the design of the new building, to ensure that its scale, height and finishes blend into the landscape rather than dominating it.
- Special care should be taken with any external lighting provided for access routes, entrances and car parks, to avoid light pollution, and intrusion on the rural character of the village after dark.
- The channel along the S side of the site appears to be a natural rather than a cultural heritage feature, and is already very irregular in form. It will need to bridged to provide vehicle access, and perhaps also in places for parking areas.
- However, if possible it should not be entirely infilled and obliterated, as it defines the 'island' character of the site.

3.8 Services / Utility Search

Searches were limited to principal utility companies. The site owner confirmed that no new services have been located within the site in recent times and since the advent of new mobile and data networks.

- There is a live BT cable route along the western edge of the site along the line of the footpath outwith the proposed build zone
- There are no other services on record within the site boundary
- The nearest drainage connection is on the A85 on the other side of the River Earn. The Engineer has assessed options in his report and his recommendation is to accommodate foul drainage within the site.
- The nearest water connection is on the other side of the River Earn. Although water supplies are delivered to the nearby golf course and the caravan site along the same side of the Loch, there is no plan evidence of routes to these. A connection will be possible but costs need to be established.
- There is no gas service in the vicinity and no network gas route close to the site. Mains gas is unlikely to be an option for heating.
- There is an 11kV overhead electricity supply line running approximately 50m to the south of the site and distribution networks just to the north of the site on the other side of the River Earn. Connections will be achievable. The overhead line crosses the South Loch Earn Road on the approach from the village and this will need to be assessed for site access, deliveries and plant.

3.9 Health and Safety Review

- Initial service searches indicate that the only live service on site is the BT line that runs parallel to the path on the west side. Currently, there are no proposals to develop within this area. Contractors should always carry out independent checks for live services before carrying out any works on the site.
- Existing overhead power line on access between turn off from A85 and site access to be located and height to be checked for clearance. Clearance to be clearly marked using goalposts or similar if deemed necessary.
- Recommendations of Flood Risk Assessment for design and location of building to be followed. Agree access requirements with Emergency Services and new access levels to be at suitable level.

- Bridge strength to be assessed and delivery loads to be controlled to suit. Bridge condition to be monitored throughout construction phase.
- Consideration should be made to the risk of drowning to young unattended children within the site which is surrounded by water.

3.10 Pre-Application Enquiry to Loch Lomond and the Trossachs National Park Authority

- A pre Application Planning Enquiry Response Ref: PRE/2021/0253 was received from the Loch Lomond and the Trossachs National Park Authority dated 7th December 2021
- Advice was that the studies as carried out for this report would be required to assess and demonstrate the suitability of the site for this development.
- The Planner's initial assessment of the proposal, based on the information submitted, is that the level of development proposed with the associated access and car parking will result in an excessive loss of woodland which will detrimentally change the visual character and appearance of this site, within the conservation area and will disrupt the biodiversity and woodland habitat currently in this location.
- The studies demonstrate that the proposals will need to be adjusted to suit existing features but that this can all be achieved within the site area without affecting woodland, landscape and pond features or disrupting the biodiversity and woodland habitat.
- However, this would need to be tested through the Planning system by submitting a detailed Planning Application to demonstrate how this can be achieved.

4. SUMMARY OF CONCLUSIONS

Generally, the findings of the various studies and reports are encouraging and do not present any significant concerns that may affect the feasibility of the proposal to erect a new Village Hall on the proposed site. However, the viability of an access needs further investigation.

- The approximate proposed location for the building at the high point of the site mitigates flood risk concerns and allows for the 600mm freeboard required above the anticipated flood level.
- Foul and surface water drainage can be both be provided to acceptable standards.
- A site-specific Flood Emergency Plan should be developed, and the resulting plan issued to all relevant stakeholders involved with managing the proposed facility.
- There was no evidence of protected species within the site and no habitats of international importance were discovered during the survey although further survey work will be required prior to commencement of works.
- There are a few trees that will need to be retained on site but it will be possible to develop the buildings, amenities and parking without affecting these. Some trees along the South Loch Earn Road need to be retained and this will affect the access options.
- There are no Scheduled Monuments or Listed Buildings within the study area and no Scheduled Monuments nearby although the setting and the proximity to listed buildings means that care should be taken to retain the integrity of the setting and the woodland belt.
- The only live service on site is the BT line that runs parallel to the path on the west side. Currently, there are no proposals to develop within this area. Contractors should always carry out independent checks for live services before carrying out any works on the site.
- Electricity, water and telecom services connections should be straightforward to arrange and foul and surface water drainage can be achieved.
- There are no exceptional or unusual Health and Safety Risks associated with developing the site although consideration needs to be taken of the loch and river side location both during construction and in use of the building with particular risks associated with young children in proximity to the water.
- A Pre Application enquiry Ref: PRE/2021/0253 advised that the above studies would be required to assess the suitability of the site for development. Proposals together with the studies carried out (and Phase 2 Studies where required) should be able to address the Planner's concerns in relation to the development but the Planning Department will ultimately make a judgement on this based on a Detailed Planning Application

However, the major issue that has arisen relates to forming a viable vehicular access to the site. The existing topography, landscape features and flood risk profile do not allow for a straight forward solution and further studies will be required to determine if a suitable access can be formed at any point along the southern boundary with the South Loch Earn Road.

Three options have been investigated and each comes with problems that are not easy to overcome (see the Transport Assessment for locations).
Option 1 (to locate the access about half way along the southern boundary along the South Loch Earn Road). This access was the initial preference but the following issues affect the viability of this access:-

- The levels in this location mean that any solution will require a lot of engineering work in the area which will be costly but will also impact on the existing pond which has been identified as a significant feature for wildlife, flood prevention, landscape setting and biodiversity.
- The pond is essential to flood prevention and infilling the pond in this area will not be permissible or advisable.

- Some widening of the road in this area may be required to allow for the necessary geometry to make the junction work.
- An access at this point will have to be above the flood level and will most likely have to take the form of a bridge which will be an expensive solution and may also be difficult to engineer due to the proximity of the junction to the bank and pond.

Option 2 (access in the approximate location of the existing gate to the east of the site) This access seems like a straight forward and obvious solution but this access is also problematic:-

- The existing access from the gate meets the South Loch Earn Road at an acute angle and this geometry does not comply with the appropriate standards for access to a new hall from this type of road.
- Due to the proximity of the access to the River Earn in this location, it is not possible to form an access with approved geometry in the same area and so the access would have to move further west to allow for the correct geometry. However, a new junction with the correct geometry would require levels in this area to be altered significantly and therefore cannot be achieved without affecting the flow of surface and flood water across the site.
- Further discussions would need to be held with the Roads Department to consider possibilities for the geometry of this access which cannot be made to comply on the basis of the guidelines that they use. There may be a safe and acceptable solution but it would need to be accepted and agreed with the Roads Department and this will take time to resolve (if it can be resolved).

Option 3 (access at location of existing path to west end of the site). This location was suggested as an alternative as it would be possible to address the flood / surface water and levels issues but other factors make this option problematic:-

- Existing trees 6735, 6736, 6737, 6738 and 6739 and their root protection zones will all be potentially affected by any proposed access in this area. Trees 6735 and 6739 have been specifically identified as trees of significant size and high amenity value, and the recommendation is that these will need to be retained which rules out an access in this location.
- The necessary visibility splays for a new access in this location cannot be achieved due to the location of trees outwith the site boundary and the geometry of the road.
- Any access in this area would affect the west end of the pond within the site which has been identified as a significant feature for wildlife, flood prevention, landscape setting and biodiversity.

A further access issue is in relation to emergency vehicles and in particular the Fire Service. Historically, the Planning Department will not support proposals where the access to a site can become flooded as such flooding will potentially prevent Fire Engines from attending to a fire. This will need to be considered when resolving the site access issues.
Road widening will also require discussions with the owners of any land affected (this is most likely going to be within the Roads Department's jurisdiction but will only be evident once a workable junction solution has been developed).
From the initial assessments above, it seems that the most likely access location will be Option 1 but further investigations may identify a different option that is more cost effective and easier to achieve.

5. RECOMMENDATIONS

- Before investing in the next stage of design development, we recommend that further investigations are carried out to determine if an appropriate new access can be formed and what will be involved. This will involve discussions with the Roads Department and Fire Service and will also involve more detailed design work for the junction and any associated retaining, banking, culvert and/or bridge along with investigations into ownership for road widening if required.
- At this stage, we would also recommend that, if possible, further discussions should be held with the Planning Department in relation to the initial Pre Application Response to determine if the studies mitigate their concerns relating to the impact of the development.
- Whilst we believe that a workable access solution can be found, it seems likely that the solution will have significant cost implications due to the site conditions which may also affect the viability of the overall scheme. Therefore, we also recommend that Budget Costs should be developed to assess the financial viability of the proposals. The Brief for the new Hall will need to be further developed for the Budget Cost and some concept sketches for the proposed hall and landscaping may need to be worked up.
- Once all of the above has been done, we recommend that more detailed sketches should be developed for presentation to the Community and for further discussions with the Planning Department.
- Detailed proposals should then be developed for a Detailed Planning Application which should be determined before moving forward to the following stages of Building Warrant, Production Information, Tender and site operations.
- A site-specific Flood Emergency Plan should be developed, and the resulting plan issued to all relevant stakeholders involved with managing the proposed facility.