



Cormanachan Community Woodlands Ltd
Cormonachan Community Woodlands Heritage Project
20th May 2021



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1. Confidentiality

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2. Introduction

2.1 The Cormonachan Woodlands are located on the western side of Loch Goil off the minor road between Lochgoilhead and Carrick Castle, within the Argyll Forest Park and Loch Lomond & Trossachs National Park. The woodlands extend to approximately 60 hectares and are described as ancient Atlantic semi natural woodland predominantly of oak and hazel species. The Cormonachan Community Woodlands Ltd (CCW) is a not-for-profit organisation who manage the woodlands on behalf of the community for conservation, education and recreation by agreement with Forest Enterprise Scotland and education provider Ardroy Outdoor Education Centre (AOEC Trust Ltd).

2.2 The CCW are successfully implementing an ongoing programme of conservation work including the removal of non-native species from within the woodlands and have developed a 2.5km circular route incorporating educational facilities and a carpark in the northern extent of the woodlands.

2.3 The CCW would like to further develop access provision to the southern area of woodlands by constructing a 2km path of width 1.8m, linking the spectacular Cormonachan Burn waterfalls and the ancient settlement / homestead of Upper Cormonachan. The CWA approached McGowan Ltd in August 2018 to carry out a path survey of an indicative route from the Contemplation Shelter on the existing circular route, south to Upper Cormonachan and the waterfalls and beyond to the east to a proposed new car park off the minor road at the Cormonachan Burn road bridge about 2 miles north of Carrick Castle. This report provides a quotation for carrying out the construction of the route.

2.4 Based in the heart of the Cairngorms National Park, McGowan Ltd employs 60 full time staff, with a vast range of experience and expertise in the environmental and civils sectors. With an annual turnover of £4million the company delivers a range of small to large scale specialist environmental and civils projects in sensitive locations throughout Scotland. Through attention to detail in project development, bespoke solutions for project delivery and working to externally audited ISO accreditations 9001, 14001 & 18001, McGowan Ltd give value for money and have been successful in building long-term client relationships. More information on the range of services offered by the Company can be found at www.mcgowanltd.co.uk.

3. Path Route Survey and Sub-Section Summary

3.1 McGowan Ltd carried out a walkover of an indicative route with members of the CCW on 19th September 2018. It was concluded that it would be necessary to vary and microsite the indicative route in some locations to minimise the impact on the semi natural woodland, take account of ground conditions and facilitate better path alignment. In addition, the proposed route should be split into logical sub-sections of work to be constructed in a single sequenced phase. Due to the length of the proposed route and access constraints from the existing car park and circular route to the north and proposed new car park to the south, identification of a more centralised point for access to facilitate the work would be required from the forest road to the west at NS 18970 97032, through discussion and agreement with Forest Enterprise Scotland. A detailed route survey was carried out on 20th September 2018 assisted by a CWA representative. For the purposes of the quotation the route has been broken down into 6 sub-sections, namely A-B, B-C, D-E, E-F, E-G & G-H and

additionally for the construction of the new carpark, as per the site map. A follow up site visit was conducted on 11th December 2018 to ground mark the proposed route with orange marker flags and record a GPS track.

3.2 Section A-B, 676m (Contemplation Shelter to “PAWS”): Section A-B of the proposed route proceeds south on a new alignment from the Contemplation Shelter off the existing circular route through semi natural woodland for approximately 539m, to the edge of a clear fell area. The route then swings slightly southwest avoiding the area of clear fell, along an overgrown quad route formation for a further 137m to an existing gateway to the fenced enclosure of young native planting known as the “Paws” area. The path corridor surveyed favours alignment through open areas and sections of non-native planting/regeneration which would require felling, possibly by CWA members. The route has been micro sited to avoid any oak trees, though some sensitive coppicing of Hazel, Birch and Alder may be required by agreement, to create a clear walking corridor.

3.3 Section B-C, 411m (Existing Quad Route Formation Through “Paws”): Section B-C of the proposed route along an overgrown quad route formation through the “Paws” proceeds northwest for approximately 149m and then southwest for a further 262m to an existing gateway and the junction with an existing overgrown quad route formation from the forest road. The first 149m of the route is relatively steep and aligned on a series of switch backs which could be realigned slightly to reduce gradient.

3.4 Section D-E, 274m (Site Access Route) Section D-E of the proposed route from the forest road proceeds southeast for approximately 274m along an overgrown quad route formation to a proposed spur path to the ancient settlement / homestead of Upper Cormonachan. The route requires to be realigned slightly between 204m – 221m to reduce gradient. Point D of the route is immediately off the forest road at NS 18970 97032 and would form the main access point and laydown area to facilitate the work. The forest road is accessed from the vicinity of Lettermay to the north, off the minor road to Carrick Castle.

3.5 Section E-F, 229m (Spur Path to Upper Cormonachan): Section E-F of the proposed route proceeds southeast for 126m on a new alignment to the ruins of the ancient settlement / homestead of Upper Cormonachan and beyond for a further 103m to the top of the waterfalls on the Cormonachan Burn.

3.6 Section E-G, 209m (Waterfall Link Path): Section E-G of the proposed route continues southeast along an overgrown quad route formation from point E for approximately 66m, the route requires to be realigned slightly between 15m – 39m to reduce gradient. The route continues on a new alignment for a further 73m through an area of clear fell. The route then swings south for a further 70m on a new alignment through more open semi natural woodland to a proposed viewpoint adjacent to the main waterfalls on the Cormonachan Burn.

3.7 Section G-H, 182m (New Carpark Link Path): Section G-H proceeds east for 182m on a new alignment through more open semi natural woodland along the northern side of the waterfalls to the proposed location of the new carpark and junction with the minor road and road bridge over the Cormonachan Burn, south to Carrick Castle. There is a short steep section of the route adjacent to the waterfalls, constrained by rock outcrops, where a technical section of stone pitched path and revetment would be required and materials would have to be imported by helicopter.

3.8 Proposed New Carpark: The location of the new carpark immediately west of the minor road is relatively constrained due to the Cormonachan Burn to the south and an electricity pole to the north, however visibility splays onto the minor road are favourable with planning guidelines. An electricity line also runs overhead in the vicinity of the car park location.

As a consequence, a car park of modest size (20m x 20m) and of similar dimension to the existing car park is proposed. Liaison with the electricity provider will be necessary to ensure that necessary consents and a safe method of work are in place prior to construction. HSE GS6 Guidelines will be followed for the avoidance of danger from overhead power lines. An excavator equipped with a height restriction device may be required. The carpark bell mouth entrance, layout and drainage regime will require prior approval by the planning authority. CWA have engaged the services of an Architect to submit a planning application for the car park.

3.9 Viewpoints/Resting places: Four locations along the route have been identified as viewpoint/resting places. These will be of modest size (4m x 4m) and an allowance has been made to provide natural boulder resting perches won from the vicinity of the site.

4. Access Constraints

4.1 Access for construction of the proposed route from the existing carpark to the north is not desirable due to its relative remoteness from the majority of the route and the scale of work required. The carpark is relatively small and of an insufficient size to accommodate the provision of welfare facilities, equipment storage and a stockpiling area for materials, while also catering for existing recreational uses and activities being carried out by CWA. In addition, access to the start of the proposed route from the Contemplation Shelter would be along a section of the existing circular route from the carpark. This section of path is relatively steep and aligned on a series of switch backs which are unsuitable for importing the material quantities required.

4.2 Utilising the new car park to the south as an access point for construction of the proposed route is only viable for a very limited part of Section G-H immediately west of the carpark. Due to the gradient of part of the route running parallel to the waterfalls, where a stone pitched path is proposed, machinery access for import of materials is not viable.

4.3 Through negotiation with Forest Land Scotland it is therefore proposed that the site access point for the work would be from point D at NS 18970 97032. A laydown area for the provision of welfare facilities, equipment and material delivery and stockpiling could be formed in the vicinity of the turning area just south of the access point off the forest road. The forest road is accessed from the vicinity of Lettermay to the north, off the minor road to Carrick Castle.

4.4 The existing quad route to the southeast of access point D, Section D-E could be upgraded to facilitate access for path construction of Sections E-F, E-G and the western part of Section G-H, with the eastern part of Section G-H being constructed from the new car park at point H.

4.5 The existing quad route to the northeast of access point D, Section B-C could be upgraded to facilitate access for path construction of Section A-B. In addition, by upgrading Section B-C which passes through the "Paws" area of recent native re-planting, access provision for on going management will be enhanced. Additionally, with agreement of Forest Enterprise Scotland, linking the proposed route with the existing forest road provides an opportunity for provision of an alternative circular route north rather than using the minor road and ties in with additional access points to the CWA managed woodlands.

5. Tree Protection Measures

5.1 For Section A-B, part of Section E-G and Section G-H the route passes through semi natural woodland. The path corridor surveyed favours alignment through open areas and sections of non-native planting/regeneration which would

require felling, possibly by CWA members. The route has been micro sited to avoid any oak trees, though some sensitive coppicing of Hazel, Birch and Alder is required, possibly by CWA by agreement with interested parties, to create a clear walking corridor.

5.2 For these sections of the route and in addition for Section E-F, due to the archaeological interests associated with the ruins at Upper Cormonachan a no-dig technique would be employed to construct the path and associated drainage regime to mitigate against damage to tree roots and disturbance to the natural hydrology on site. This would involve floating the path on a geotextile membrane reinforced with geogrid and importing aggregate path construction materials on top, effectively causewaying the path formation above the surrounding ground level. Vegetation would be sensitively sourced from the immediate path corridor to retain the math margins. The drainage regime would consist of culvert pipes installed in low points, hollows and flushes to minimise disruption to the natural hydrology. More obvious watercourses and those marked on a 1:50,000 Ordnance Survey map would be bridged and constructed in line with the General Binding Rules as per The Water Environment (controlled Activities) (Scotland) Regulations 2011 (CAR).

5.3 No allowance for other specific tree protection measures have been included for in the quotation and any other requirements imposed by the Planning Authority and interested parties would be at an additional cost.

5.4 On 11th December 2018 a detailed walkover of the proposed route was carried out and all trees requiring felling or coppicing were marked with orange tape, the table below summarises the work required.

| Section | Species for Felling | | Species for Coppicing | | | Fallen Oak Branch/Trunk to be sensitively Relocated to Path Margin |
|-----------------|---------------------|-------|-----------------------|-------|-------|--|
| | Norway Spruce | Larch | Birch | Hazel | Alder | |
| A-B (0m-189m) | 31no | - | 11no | 8no | - | - |
| A-B (189m-676m) | 22no | - | 15no | 4no | 5no | - |
| E-F | - | 8no | 25no | - | - | - |
| E-G | 31no | - | 11no | 8no | - | 2no |
| G-H | - | - | 3no | - | - | 1no |

6. The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR).

6.1 The scope of engineering works authorised by The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) and their amendments applies to all engineering, building and other works in inland surface waters (including wetlands) where those works pose a risk of significant adverse impact. General Binding Rules (GBRs) represent a set of mandatory rules which cover specific low risk activities. Activities complying with the rules do not require an application to be made to SEPA, as compliance with a GBR is considered to be compliance with an authorisation. Since the operator is not required to apply to SEPA, there are no associated charges.

6.2 By complying with General Binding Rule (GBR) 6 it is proposed that over more obvious watercourses and any marked on an Ordnance Survey 1:50,000 map, that a temporary bridged crossing will be installed to facilitate import of materials associated with the work. As part of the finishing work these temporary bridged crossings will be replaced with a number of wooden pedestrian bridges of span 4m. As no works are being carried out on the bed of these watercourses and impact to the banks is minimised, the work will fall under GBR 6 and the work is deemed authorised.

6.3 The finished wooden pedestrian bridges will be delivered to site in kit form (pre-cut and drilled) for ease of final assembly. In addition, the associated foundations will be of pre-cast mass concrete, manufactured off site, to mitigate against environmental contamination on site.

7. Private Water Supplies

7.1 Through agreement with Forest Land Scotland, five Cormonachan residences have private water supplies feeding from the vicinity of the site. There is evidence of a number of blue, alkathene water pipes and water storage tanks on site and prior to work commencing it is suggested that CWA carry out liaison with any interested parties to mitigate against impact on private water supplies. The path and associated drainage regime have been designed to minimise impact on the site hydrology and more significant watercourses are being bridged. If practical re-siting some of the pipes in the vicinity of the Cormonachan Burn waterfalls could be considered to reduce visual intrusion, though no cost allowance has been made for this. An allowance has been made however, to place any obvious water pipes crossing the proposed route, in a conduit.

8. Planning Permissions

8.1 All planning permissions, consents and fees in relation to construction of the proposed path and associated car park will be the responsibility of CWA prior to commencement of work.

9. The Construction (Design and Management) Regulations 2015 (CDM 2015)

9.1 As the proposed work will take longer than 30 days to complete, they may have to be be notifiable to the Health and Safety Executive (HSE). An allowance has been included in the quotation for production of a Construction Phase Plan for the work.

10. Path Construction Methodology

10.1 As described previously in section 5.2, for Section A-B, Section E-F, part of Section E-G and Section G-H a no-dig technique would be employed to construct the path and associated drainage regime to mitigate against damage to tree roots, disturbance to the natural hydrology on site and to protect archaeological interests. All aggregate materials to construct the path will require to be sourced from a local quarry and imported to site from Point D.

10.2 Due to the quantities of materials required to facilitate construction of these sections and access to them, it will also be necessary to reinforce the formation of the existing overgrown quad track in Sections B-C, Section D-E and part of Section E-G with more robust quality aggregate capping materials sourced from a local quarry. In addition, this will improve the quality and durability of the finished path surface. Where required to facilitate access, the alignment of these sections may be varied slightly to reduce gradient using on-site as dug material won from the path corridor, in the path formation layer.

10.3 For two short parts of Sections A-B and Section E-G, where the proposed route passes through areas of clear fell, the quad track formation becomes indistinct or peters out. A new path formation layer will require to be constructed using on-site as dug material won from the path corridor. These sections will be finished with more robust quality capping materials sourced from a local quarry.

10.4 For section G-H the available path corridor and options for alignment to reduce gradient are very limited due its proximity to the Cormonachan Burn waterfalls to the south and rock outcrops to the north. The proximity of some oak trees to the proposed route are also a limiting factor and it is therefore proposed that the width of this section of the route is reduced to a maximum of 1.2m.

10.5 On going maintenance of the proposed route, post construction will be carried out CCW.

11. Materials

11.1 Estimates of approximate material quantities to carry out the work are detailed in the table below. Aggregate materials will be sourced from Bonnar Sand and Gravel Ltd, Clachan Quarry, Cairdow, Argyll, PA26 8BH. There may be other suppliers of suitable materials available locally for example the quarry in Lochgoilhead operated by Drimsynic Construction and this will be investigated further prior to commencement of work and procurement of sample materials.

| Section | Geotextile & Geogrid | As dug on site material | Crusher run | Whin Dust | Bridges and pre-cast abutments | Culvert pipes, 300mm diameter | Building stone | Gates |
|---------|----------------------|-------------------------|-------------|-----------|--------------------------------|-------------------------------|----------------|-------|
| A-B | 539m | 200 tonnes | 540 tonnes | 65 tonnes | 2no | 9no | - | - |
| B-C | - | 300 tonnes | 330 tonnes | 80 tonnes | - | 4no | - | 4no |
| D-E | - | - | 220 tonnes | 50 tonnes | - | 3no | - | - |
| E-F | 229m | - | 180 tonnes | 40 tonnes | 1 | 3no | - | - |
| E-G | 70m | 140 tonnes | 160 tonnes | 40 tonnes | 1 | 3no | - | - |
| G-H | 138m | - | 110 tonnes | 20 tonnes | 1 | 3no | 80 tonnes | - |
| Carpark | 400m ² | - | 320 tonnes | 40 tonnes | - | 1no | - | - |

12. Machinery

12.1 The following equipment will be used to construct the route.

- 1no 13t excavator, 1no 6 t excavator, 2no 2 tonne tracked dumpers, 1no pedestrian roller.

13. Schedule of Works and Costing

13.1 Quotation: Preliminaries

| Item | Description | Quantity | Unit | Rate | Amount |
|----------------------------|---|----------|------|------|-------------------|
| 1 | Mobilisation of equipment to and from site. | | | Sum | £4,000.00 |
| 2 | Allowance for establishment and reinstatement of site compound and formation of a laydown area for material deliveries. | | | Sum | £2,000.00 |
| 3 | Allowance for compliance with CDM requirements throughout the project. | | | Sum | £1,000.00 |
| 4 | Allowance for Client liaison and reporting throughout the project. | | | Sum | £1,000.00 |
| 5 | Allowance for provision of welfare facilities. | | | Sum | £2,000.00 |
| 6 | Allowance for ground marking of proposed route to identify tree removal and pruning requirements. | | | Sum | £400.00 |
| 7 | Provisional sum for Car park signs and junction path route signs | | | Sum | £1,500.00 |
| 8 | Provisional sum for signage, 2no x A1 GRP signs with lecterns for the new car park and old settlement and 1no upgraded sign for the existing carpark. | | | Sum | £1,750.00 |
| Total Cost (ex Vat) | | | | | £13,650.00 |

13.2 Quotation: Section A-B (Contemplation Shelter to “Paws”)

| Item | Description | Quantity | Unit | £Rate | £Amount |
|------|---|----------|------|-----------|------------|
| 1 | Between 0m – 539m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 2m. Using imported materials construct path formation of width 2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 539 | m | £55.10 | £29,698.90 |
| 2 | Between 539m - 676m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 2m. Using imported materials construct path formation of width 2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 137 | m | £53.30 | £7,302.10 |
| 3 | At 360m & 542m construct viewpoint resting areas of approximate area 16m ² on a geotextile and geogrid membrane with 250mm crusher run and 50mm surfacing compacted in layers to form a 1:35 centre camber. Incorporate 3no stone perches using on site boulders. | 2 | no | £650.00 | £1,300.00 |
| 4 | At watercourses at 88m and 436m form temporary road plate crossing points to facilitate import of materials. | 2 | no | £300.00 | £600.00 |
| 5 | At watercourses at 88m and 436m install 4m x 1.5m (6m ²) footbridge incorporating non-slip decking on pre-formed concrete abutments. | 2 | no | £5,500.00 | £11,000.00 |
| 6 | Between 539m – 676m install scalloped side ditch. | 137 | m | £1.00 | £137.00 |
| 7 | At suitable locations install 300mm twin walled culvert pipes of length 3m incorporating stone head walls. | 9 | no | £120.00 | £1,080.00 |

| | |
|----------------------------|-------------------|
| Total Cost (ex Vat) | £51,118.00 |
|----------------------------|-------------------|

13.3 Quotation: Section B-C (Existing Quad Route Formation Through "Paws")

| Item | Description | Quantity | Unit | £Rate | £Amount |
|----------------------------|---|----------|------|---------|-------------------|
| 1 | Between 0m - 411m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 2m. Using imported materials construct path formation of width 2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 411 | m | £57.40 | £23,591.40 |
| 2 | Between 0m – 411m improve existing ditch. | 411 | m | £1.00 | £411.00 |
| 3 | At suitable locations install 300mm twin walled culvert pipes of length 3m incorporating stone head walls. | 4 | no | £120.00 | £480.00 |
| 4 | At 0m and 401m install a 3.6m deer gate and 1.5m pedestrian gate. | 4 | no | £700.00 | £2,800.00 |
| Total Cost (ex Vat) | | | | | £27,282.40 |

13.4 Quotation: Section D-E (Site Access Route)

| Item | Description | Quantity | Unit | £Rate | £Amount |
|------|---|----------|------|--------|------------|
| 1 | Between 0m - 274m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 2m. Using imported materials construct path formation of width 2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 274 | m | £56.60 | £15,508.40 |
| 2 | Between 0m – 274m install scalloped side ditch. | 274 | m | £1.00 | £274.00 |

| | | | | | |
|----------------------------|--|---|----|---------|-------------------|
| 3 | At suitable locations install 300mm twin walled culvert pipes of length 3m incorporating stone head walls. | 3 | no | £120.00 | £360.00 |
| Total Cost (ex Vat) | | | | | £16,142.40 |

13.5 Quotation: Section E-F (Spur Path to Upper Cormonachan)

| Item | Description | Quantity | Unit | £Rate | £Amount |
|----------------------------|---|----------|------|-----------|-------------------|
| 1 | Between 0m – 229m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 2m. Using imported materials construct path formation of width 2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 229 | m | £57.00 | £13,053.00 |
| 2 | At 229m construct viewpoint resting area of approximate area 16m ² on a geotextile and geogrid membrane with 250mm crusher run and 50mm surfacing compacted in layers to form a 1:35 centre camber. Incorporate 3no stone perches using on site boulders. | 1 | no | £650.00 | £650.00 |
| 3 | At watercourse at 15m form temporary road plate crossing points to facilitate import of materials. | 1 | no | £300.00 | £300.00 |
| 4 | At watercourse at 15m install 4m x 1.5m (6 square meters)footbridge incorporating non-slip decking on pre-formed concrete abutments. | 1 | no | £5,500.00 | £5,500.00 |
| 5 | At suitable locations install 300mm twin walled culvert pipes of length 3m incorporating stone head walls. | 3 | no | £120.00 | £360.00 |
| Total Cost (ex Vat) | | | | | £19,863.00 |

13.6 Quotation: Section E-G (Waterfall Link Path)

| Item | Description | Quantity | Unit | £Rate | £Amount |
|----------------------------|---|----------|------|-----------|-------------------|
| 1 | Between 0m - 209m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 2m. Using imported materials construct path formation of width 2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 209 | m | £55.75 | £11,651.75 |
| 2 | At 250m construct viewpoint resting areas of approximate area 16m ² on a geotextile and geogrid membrane with 250mm crusher run and 50mm surfacing compacted in layers to form a 1:35 centre camber. Incorporate 3no stone perches using on site boulders. | 1 | no | £650.00 | £650.00 |
| 3 | At watercourse at 165m form temporary road plate crossing points to facilitate import of materials. | 1 | no | £300.00 | £300.00 |
| 4 | At watercourse at 165m install 4m x 1.5m footbridge incorporating non-slip decking on pre-formed concrete abutments. | 1 | no | £5,500.00 | £5,500.00 |
| 5 | Between 0m – 139m install scalloped side ditch. | 139 | m | £1.00 | £139.00 |
| 6 | At suitable locations install 300mm twin walled culvert pipes of length 3m incorporating stone head walls. | 3 | no | £120.00 | £360.00 |
| 7 | At locations where alkathene water pipe crosses route protect pipe in a conduit. | | sum | | £500.00 |
| Total Cost (ex Vat) | | | | | £19,100.75 |

13.7 Quotation: Section G-H (New Carpark Link Path)

| Item | Description | Quantity | Unit | £Rate | £Amount |
|------|-------------|----------|------|-------|---------|
|------|-------------|----------|------|-------|---------|

| | | | | | |
|----------------------------|--|-----|--------|-----------|-------------------|
| 1 | Between 0m – 94m and 138m - 182m supply and lay a geotextile membrane and geogrid reinforcing along base of path of width 1.2m. Using imported materials construct path formation of width 1.2m with 200mm average depth of crusher run/type 1 compacted to form a 1:35 centre camber. using imported materials create a finished width of 1.2m and surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 138 | m | £45.50 | £6,279.00 |
| 2 | Select, supply and deliver stone for construction of pitched path and revetment and bag up in helicopter bags at point D. | 80 | Tonnes | £62.00 | £4,960.00 |
| 3 | Airlift of bagged stone. | | sum | | £11,000.00 |
| 4 | Construct 1.2m wide stone pitched path incorporating revetment and stone waters as required. | 44 | m | £280.00 | £12,320.00 |
| 5 | At watercourse at 165m form temporary road plate crossing points to facilitate import of materials. | 1 | no | £300.00 | £300.00 |
| 6 | At watercourse at 162m install 4m x 1.5m footbridge incorporating non-slip decking on pre-formed concrete abutments. | 1 | no | £5,500.00 | £5,500.00 |
| 7 | At suitable locations install 300mm twin walled culvert pipes of length 3m incorporating stone head walls. | 3 | no | £120.00 | £360.00 |
| 8 | At locations where alkathene water pipe crosses route protect pipe in a conduit. | | sum | | £500.00 |
| Total Cost (ex Vat) | | | | | £41,219.00 |

13.8 Quotation: Proposed New Carpark

| Item | Description | Quantity | Unit | £Rate | £Amount |
|----------------------------|---|----------|----------------|--------|-------------------|
| 1 | At new carpark location strip vegetation from site and supply and lay a geotextile membrane and geogrid reinforcing along base of car park. | 400 | m ² | £5.00 | £2,000.00 |
| 2 | At new car park location using imported materials construct car park formation with 400mm average depth of crusher run compacted to form a 1:35 cross fall. | 400 | m ² | £30.00 | £12,000.00 |
| 3 | At new car park location surface with 50mm average depth of whin dust surfacing of particle size 20mm down. Landscape path margins with vegetation. | 400 | m ² | £5.00 | £2,000.00 |
| 4 | Construct and tarmac car park bell mouth junction with road. | | sum | | £5,000.00 |
| 5 | Install 300mm twin walled culvert pipes of length 6m incorporating stone head walls in roadside ditch and a rain channel to prevent surface water from car park shedding onto road. | | sum | | £1,500.00 |
| 6 | Install scalloped side ditch around car park draining to Cormonachan Burn. | 80 | m | £1.00 | £80.00 |
| Total Cost (ex Vat) | | | | | £22,580.00 |

14. Summary of Quotation

| Item | Route Section | £Amount (ex Vat) |
|------|--|------------------|
| 1 | Preliminaries | £13,650.00 |
| 2 | Section A-B (Contemplation Shelter to "Paws") | £51,118.00 |
| 3 | Section B-C (Existing Quad Route Formation Through "Paws") | £27,282.40 |
| 4 | Section D-E (Site Access Route) | £16,142.40 |
| 5 | Section E-F (Spur Path to Upper Cormonachan) | £19,863.00 |
| 6 | Section E-G (Waterfall Link Path) | £19,100.75 |
| 7 | Section G-H (New Carpark Link Path) | £41,219.00 |

| | | |
|----------------------------|----------------------|--------------------|
| 8 | Proposed New Carpark | £22,580.00 |
| Total Cost (ex Vat) | | £210,955.55 |

15. Route Grid References

15.1 A summary of route grid references is detailed in the table below. Grid references are approximate and are not sub-metre accurate.

| Section Chainage | Description | Grid reference |
|--|---|----------------|
| Section A-B, 668m (Contemplation Shelter to "Paws") | | |
| 0m | Contemplation shelter | NS 19583 97638 |
| 83m | Culvert 1 | NS 19555 97572 |
| 265m | Culvert 2 | NS 19500 97414 |
| 360m | Viewpoint 1, oak tree clearing | NS 19450 97349 |
| 433m | Bridge1 | NS 19404 97309 |
| 491m | Bridge 2 | NS 19384 97266 |
| 542m | View point 2, Loch Goil south, edge of clear fell | NS 19362 97219 |
| 668m | Gate to "Paws" and junction with Section B-C | NS 19301 97130 |
| Section B-C, 430m (Existing Quad Route Formation Through "Paws") | | |
| 0m | Gate to "Paws" and junction with Section A-B | NS 19301 97130 |
| 185m | Existing culvert | NS 19191 97209 |
| 415m | Gate to "Paws" | NS 19050 97049 |
| 430m | Existing culvert and junction with Section D-E | NS 19038 97042 |
| Section D-E, 275m (Site Access Route) | | |
| 0m | Forest road | NS 18970 97032 |
| 275m | Junction with Section E-F & E-G | NS 19095 96883 |

| Section E-F, 220m (Spur Path to Upper Cormonachan) | | |
|--|---|----------------|
| 0m | Junction with Section D-E & E-G | NS 19095 96883 |
| Section Chainage | Description | Grid reference |
| 15m | Bridge 3 | NS 19087 96876 |
| 220m | Viewpoint 3, Upper waterfalls | NS 19009 96705 |
| Section E-G, 250m (Waterfall Link Path) | | |
| 0m | Junction with Section D-E & E-F | NS 19095 96883 |
| 56m | End of quad route formation, start of clear fell | NS 19147 96867 |
| 143m | End of clear fell, start of semi natural woodland | NS 19182 96801 |
| 165m | Bridge 4 | NS 19176 96787 |
| 250m | Viewpoint 4, Main waterfalls | NS 19138 96733 |
| Section G-H, 200m (New Carpark Link Path) | | |
| 0m | Junction with Section E-G | NS 19155 96745 |
| 44m | Start stone pitched path section | NS 19192 96733 |
| 95m | End stone pitched path section | NS 19203 96709 |
| 162m | Bridge 5 | NS 19265 96729 |
| 200m | New car park | NS 19304 96720 |
| Proposed New Carpark | | |
| 0m | New car park | NS 19304 96720 |

16. Programme

This quotation has been prepared on the basis that the works would be undertaken between December 2021 and April 2022.