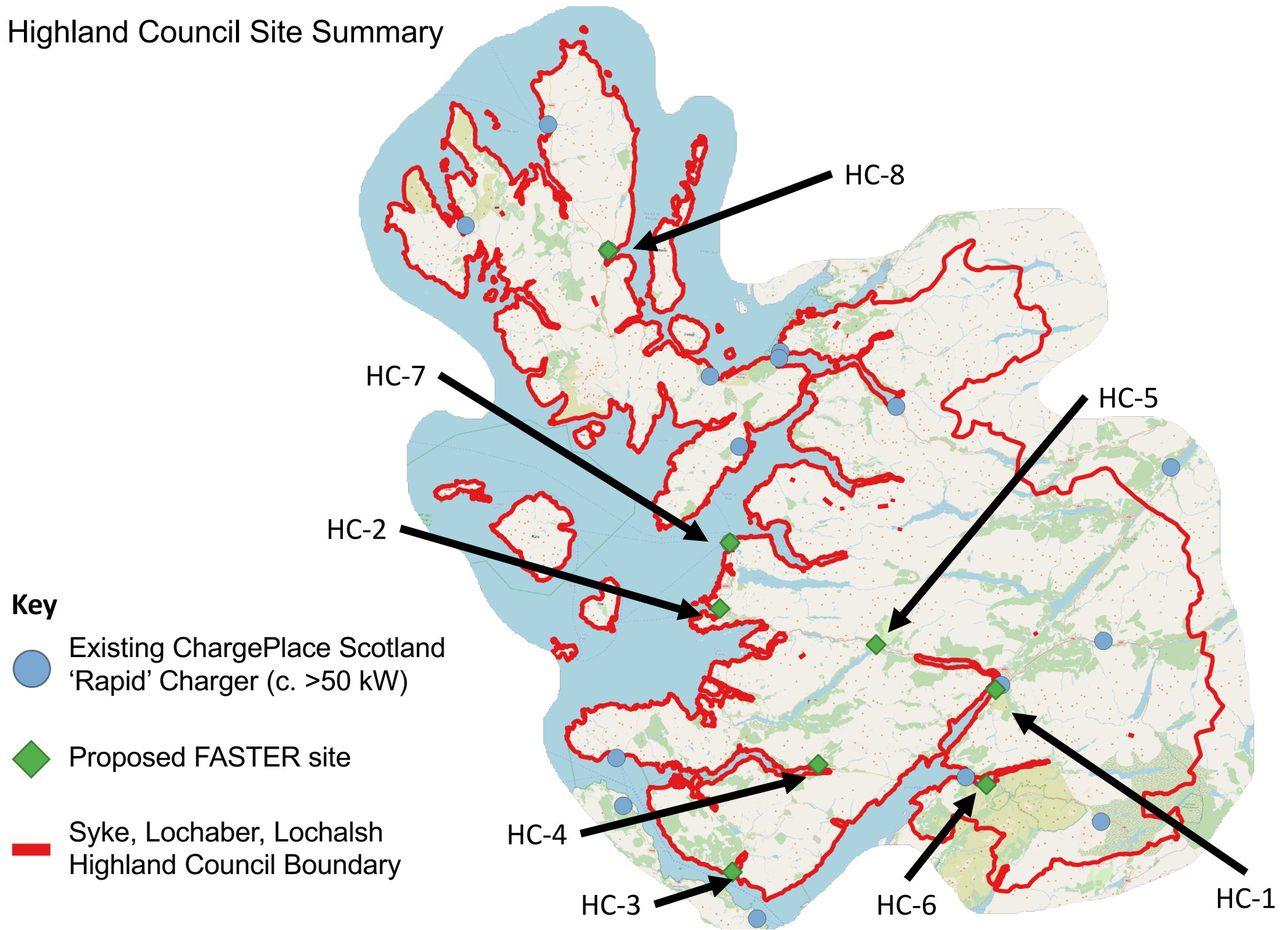


Highland Council Site Summary



Fort William – West End Car Park

Site Identifier: HC-1

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	4
	Unit 2	Dual Outlet AC Charger	22	22	1			✓(2)	2	

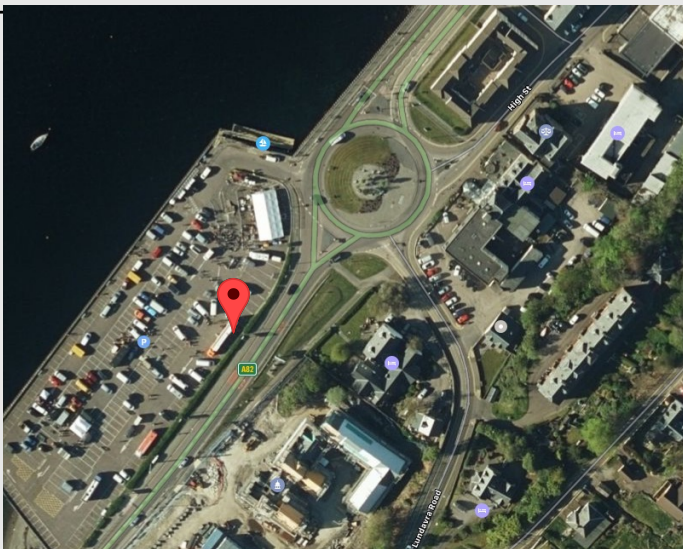
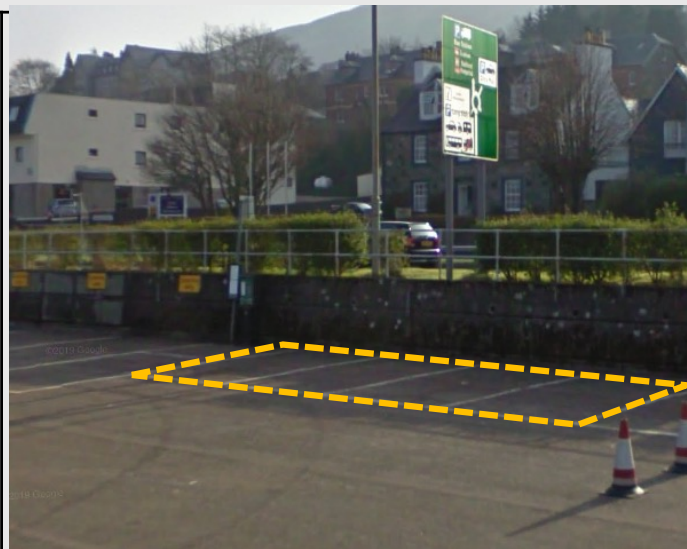
Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Council	Demand	Coverage	Local Authority		
		✓		✓	75	1

Summary Narrative

Fort William is identified as an area which requires significant EV charging infrastructure going forward. Fort William has a large population where home-charging may be impractical for many residents (e.g. no driveways) and will therefore rely on public/private charging infrastructure to meet their requirements. Fort William is marketed as 'the outdoor capital of the Highlands' with high levels of tourism traffic as well as being a strategic point on the A82 trunk road. PNDC's regional analysis identified Fort William as a site of relatively significant demand. Fort William was identified in the HITRANS EV strategy as requiring significant charging infrastructure – top 5 used charge locations and scored highly for a charging hub need.

Recommendation

West End Car Park has been identified as a suitable point for vehicle charging and can be found just beside the main road (A82) which connects Fort William to Glasgow and Inverness. This is the largest council-owned car park in Fort William with 270 spaces and is a short walk to local shops, cafés and restaurants. This site has been suggested by both the local council and residents to help cover the residential population towards the south of the town. It is recommended that this site is supplemented with a dual output AC charger. This is a potential future hub location.

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	£3,600
		DNO/Connection Costs	£490
		Site electrical works (e.g. metering, LV cabinet)	£7,000
		Installation & commissioning	£240
		Accessories (signs/bay-marking/sim-card/etc.)	£4,670
		Contingency (5 %)	£2,031
		Total Costing	£42,647

Arisaig – Arisaig Hotel

Site Identifier: HC-2

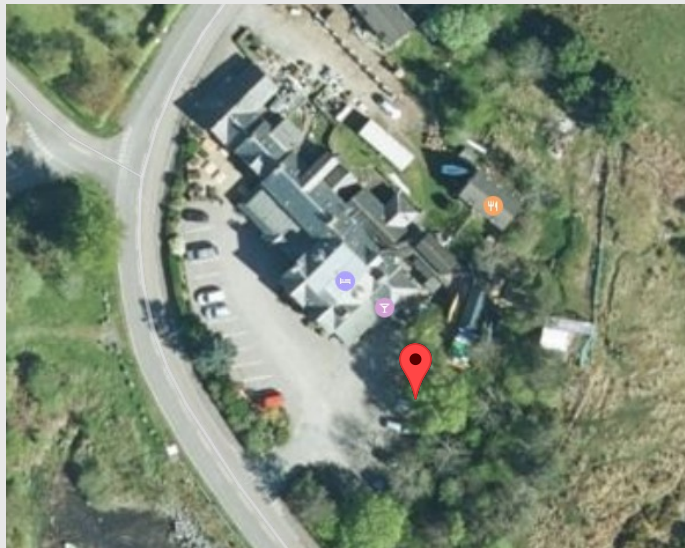

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	2
	Unit 2	N/A								

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Private	Demand	Coverage	Local Authority		
			✓	✓	53	2

Summary Narrative	
	The Arisaig site covers several use-cases; a) to help increase coverage along the A830, b) to introduce coverage south of the A830 Lochailort junction along the A861 into the community of Moidart (an area with very low penetration of EV charging points) and c) to provide rapid charging for the town of Arisaig for both residents without access to home-charging and visitors (Arisaig sees significant tourist visitors in the summer months). PNDC's analysis identified Arisaig as a site that helps improve the coverage of the journey (rapid) charging network in this region. Arisaig/Glennfinnan identified in HITRANS EV strategy as network gap priorities.

Recommendation	
	There was no appropriate public-owned land identified during searches of the Arisaig community. Co-locating a Rapid charger with the existing 25kW DC and 7kW AC chargers would be challenging due to site space constraints and the necessary upgrades to the local electrical infrastructure. The Arisaig Hotel was identified as a good candidate due to their large car parking area and relative closeness to the DNO network.

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	N/A
		DNO/Connection Costs	£3,500
		Site electrical works (e.g. metering, LV cabinet)	£6,000
		Installation & commissioning	£120
		Accessories (signs/bay-marking/sim-card/etc.)	£2,335
		Contingency (5 %)	£1,829
		Total Costing	£38,400

Lochaline – Memorial Car Park

Site Identifier: HC-3

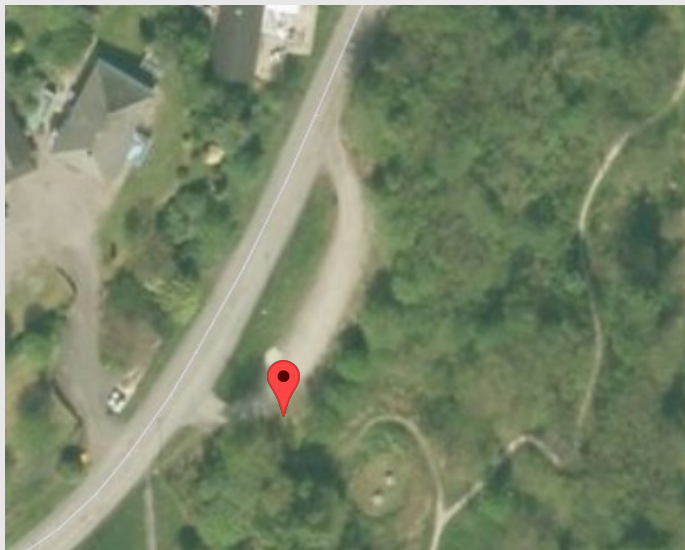
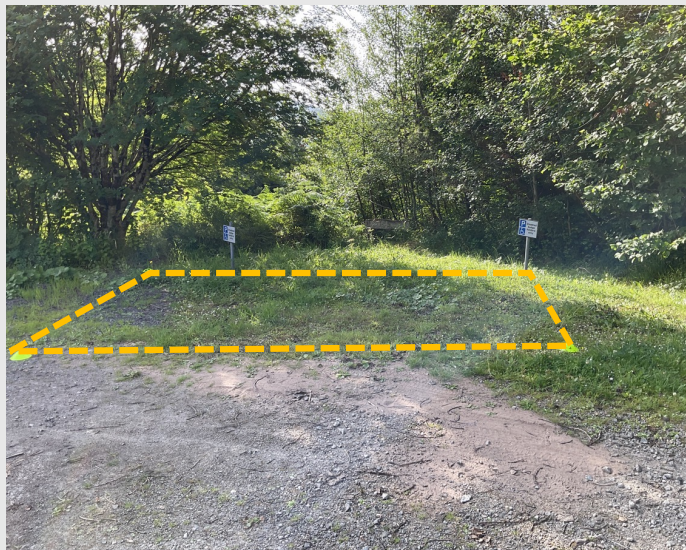
Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	2
	Unit 2	N/A								

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Private	Demand	Coverage	Local Authority		
			✓		53	3

Summary Narrative
<p>Geospatial analysis identified poor coverage in the Morvern peninsula. The wider area (Sundart, Argour, Ardnamurchan, Moidart and Sunart) has very limited access to journey (rapid) chargers with only one rapid charger in the area. This site, in tandem with HC-2, 4 & 5, will significantly improve coverage for these communities. Lochaline has a ferry to Fishnish, Mull (crossing into Argyll and Bute council region). Locating a charging point in Lochaline would help to provide coverage to Drimnin which has ferry links to Tobermory (on Mull) and Kilchoan (Northern Ardnamurchan) - both of these remote ferry terminals already host rapid chargers. PNDC's analysis identified Lochaline as a site that helps improve the coverage of the journey (rapid) charging network in this region.</p>

Recommendation
<p>Several sites were investigated for this area. Initially, approaches were made with the owner of the ferry terminal however it was indicated that their site was too small to host the infrastructure and the harbour was due for redevelopment that could disrupt any installation. Discussions with the Morven community development trust indicated that the car parking site they own beside the memorial monument would be a good location to site the infrastructure.</p>

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	N/A
		DNO/Connection Costs	£6,150
		Site electrical works (e.g. metering, LV cabinet)	£6,000
		Installation & commissioning	£120
		Accessories (signs/bay-marking/sim-card/etc.)	£2,335
		Contingency (5 %)	£1,961
		Total Costing	£41,182

Strontian – Village Store Car Park

Site Identifier: HC-4

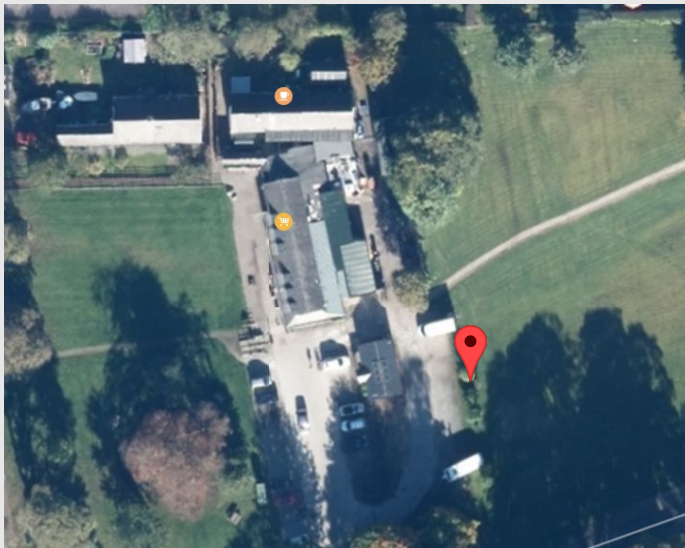

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	2
	Unit 2	N/A								

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Private	Demand	Coverage	Local Authority		
			✓		53	4

Summary Narrative
 The nearest rapid chargers to Strontian are >1 hour drive away from the town. Strontian is a main junction for traffic travelling south to the ferry port of Lochaline. Residential housing suffers from the lack of home-charging options and therefore members of the community will need to rely on public/private charging infrastructure. The area has many B&B, self catering and holiday lodges and is a popular with tourist. PNDC's analysis identified Strontian as a site that helps improve the coverage of the journey (rapid) charging network in this region.

Recommendation
 Several sites were identified during the search including the Sunart centre complex. It was agreed that this site was too remote from the town with wrong user use-cases for journey chargers. The central Strontian village stores car park was deemed to be more appropriate. Local shops, a tourism centre and cafés are in close proximity to the site. The car park can be found beside the A861 road which forms a ring road around the wider peninsula

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	N/A
		DNO/Connection Costs	£4,000
		Site electrical works (e.g. metering, LV cabinet)	£6,000
		Installation & commissioning	£120
		Accessories (signs/bay-marking/sim-card/etc.)	£2,335
		Contingency (5 %)	£1,854
		Total Costing	£38,925

Glenfinnan – Glenfinnan Visitor Centre

Site Identifier: HC-5

[///swept.ignites.subplot](http://swept.ignites.subplot)

(approx.)

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	2
	Unit 2	N/A								

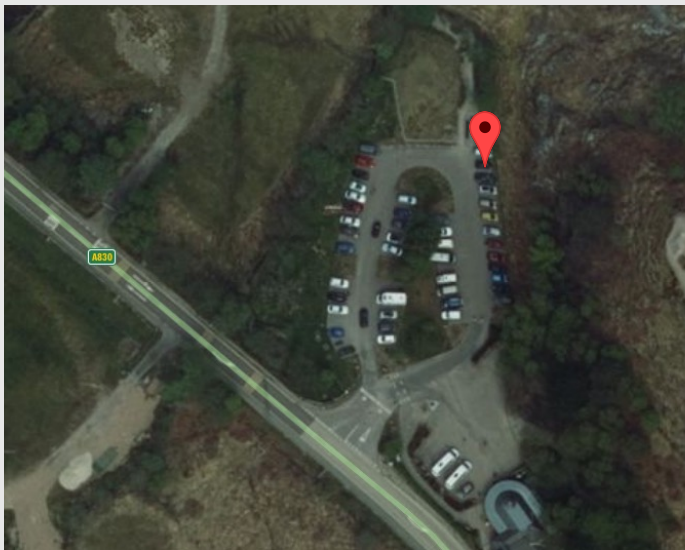

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	National Trust for Scotland	Demand	Coverage	Local Authority		
			✓		53	5

Summary Narrative

The community of Glenfinnan is approximately mid-way between Arisaig and Fort William. The community is relatively small in comparison with other sites however there is a significant number of tourism journeys to the area associated with the famous railway viaduct, monuments, local walks, several cafés and B&Bs. Local and tourist traffic to and from Arisaig/Mallaig/Skye also passes this site. Glenfinnan is about a 5 minute drive from the Ardgour junction with the A861 ring road. Ardgour is currently very poorly served by EV infrastructure. PNDC's analysis identified Glenfinnan as a site that helps improve the coverage of the journey (rapid) charging network in this region. Arisaig/Glenfinnan identified in HITRANS EV strategy as network gap priorities.

Recommendation

There is very little appropriate public land in the vicinity to Glenfinnan, and given the high footfall numbers to the area, the Glenfinnan Visitor Centre, operated by the National Trust for Scotland (NTS), appears to be a suitable candidate site for chargers to be located. A new café area has recently been opened by NTS on the site.

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	N/A
		DNO/Connection Costs	£1,500
		Site electrical works (e.g. metering, LV cabinet)	£6,000
		Installation & commissioning	£120
		Accessories (signs/bay-marking/sim-card/etc.)	£2,335
		Contingency (5 %)	£1,729
		Total Costing	£36,300

Ballachulish – Picnic Area & Public Toilets Car Park

Site Identifier: HC-6

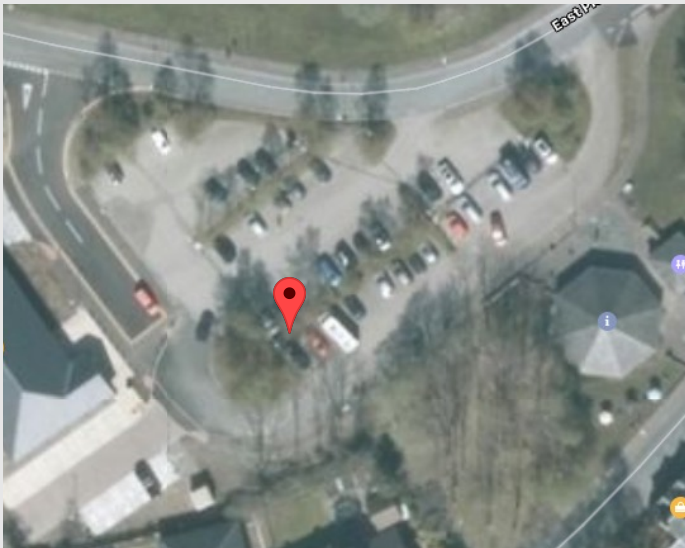

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Ultra-Rapid Charger	150	163	1	✓(2)			2	4
	Unit 2	Dual Outlet AC Charger	22	22	1			✓(2)	2	

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Public	Demand	Coverage	Local Authority		
		✓		✓	185	6

Summary Narrative
 Ballachulish is a strategic location in the Scottish road network. The area is the main junction between the large towns of Fort William and Oban (A828) as well as linking Fort William to Glasgow/Edinburgh and central belt of Scotland via the A82. The area has many houses without the option to charge off-street and is close to other communities such as Glencoe Village and Kinlochleven which have similar issues. This area will help service the popular tourist destination of Glencoe. PNDC's regional analysis identified Ballachulish as a site of relatively significant demand. Ballachulish identified in HITRANS EV strategy as network gap priorities.

Recommendation
 The car park identified for the charging infrastructure is in close proximity of public toilets, a visitor centre, picnic area, the local Co-op Supermarket and is adjacent to the A82. This site has been identified as a good site for an ultra-rapid DC charger due to its proximity to the A82 and to the DNO network with a large capacity transformer on-site. This will be the first ultra-rapid EV charger in Highland Council. An alternative rapid charger that supports CHAdeMO vehicles can be found nearby.

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£65,000
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	£3,600
		DNO/Connection Costs	£450
		Site electrical works (e.g. metering, LV cabinet)	£7,000
		Installation & commissioning	£240
		Accessories (signs/bay-marking/sim-card/etc.)	£4,670
		Contingency (5 %)	£4,048
		Total Costing	£85,008

Mallaig – West Bay Car Park

Site Identifier: HC-7

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	4
	Unit 2	Dual Outlet AC Charger	22	22	1			✓(2)	2	

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Public	Demand	Coverage	Local Authority		
		✓			75	7

Summary Narrative
Mallaig is a ferry port with routes serving several island communities in addition to Skye. Mallaig has large seasonal demand due to tourism. Analysis of charging patterns for the rapid charging infrastructure in the Highland Council region demonstrated that the existing rapid charger in Mallaig experiences a high probability of queuing at certain points during the day which is associated with the arrival and departure times of certain ferry routes. PNDC's analysis of charge point data identified Mallaig as a site of relatively significant demand.

Recommendation
The West Bay car park hosts an existing Rapid charger. It is proposed that this rapid charger is supplemented with an additional 50 kW unit with co-located fast chargers. The car park has approximately 80 spaces.

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	£3,600
		DNO/Connection Costs	£600
		Site electrical works (e.g. metering, LV cabinet)	£7,000
		Installation & commissioning	£240
		Accessories (signs/bay-marking/sim-card/etc.)	£4,670
		Contingency (5 %)	£2,036
		Total Costing	£42,762

Portree – Bayfield Car Park

Site Identifier: HC-8

[///tasks.exits.samples](http://tasks.exits.samples)
(approx.)

Not for Construction

Configuration	Unit	Charger Type	kW (output)	kW (input)	Quantity	Connectors			Bays	Total Bays
						CCS	CHAdeMO	Type 2		
Configuration	Unit 1	DC Rapid Charger	50	53	1	✓	✓		2	4
	Unit 2	Dual Outlet AC Charger	22	22	1			✓(2)	2	

Summary of Assessment	Site Ownership	Evidence Category			Connection Rating (kVA)	LA Ranking (#/8)
	Public	Demand	Coverage	Local Authority		
		✓			75	8

Summary Narrative
Demand analysis for the Highland Council region identified that additional rapid chargers in Portree will be required. Portree is the largest town on Skye and is located next to the A87 which is the main road artery on the island. This road links the island to the mainland via the Skye Bridge but also to the town of Uig where several ferries link to the Western Isles. The area has many houses without the option to charge off-street. Skye has a high seasonal tourist population. PNDC's regional analysis identified Portree as a site of relatively significant demand.

Recommendation
It is proposed that the existing charger at Bayfield Car Park is 'doubled-up' with a 50 kW DC charger with an additional dual output fast charger. The site is the largest council owned car park in the town with approximately 130 parking bays and is a short <5 minute walk to local shops, public toilets, tourist information and restaurants.

Site Location		High-Level Costing Estimate	
		EVSE Unit 1 Hardware +Warranty + Maintenance (10 years)	£24,616
		EVSE Unit 2 Hardware +Warranty + Maintenance (10 years)	£3,600
		DNO/Connection Costs	£700
		Site electrical works (e.g. metering, LV cabinet)	£7,000
		Installation & commissioning	£240
		Accessories (signs/bay-marking/sim-card/etc.)	£4,670
		Contingency (5 %)	£2,041
		Total Costing	£42,867