Highland wide Local Development Plan - Main Issues Report
Consultation Summary and Actions Sheet

Reference Number:	**HWLDP-MIR-30**
Organisation/Individual:	Bill Mowat

Action:

Immediate Response Required	x
Meeting required with Respondent	
Issue for Area Local Development Plan	x
Further Information Required	
Other (*Please Specify*)	

If no box ticked - issues raised will be dealt with in preparation of the Proposed Plan.

Issues Raised in Response:

Purpose of Main Issues Report		Previously used Land	
NPF2 for Scotland		Wild Land	
Vision for the Highlands		Water Environment	
Inverness and A96		Renewable Energy	x
The A96 Corridor		Flooding	
Phasing of Development		Waste Management	
Developer Contributions		Air Quality	
East Inverness		Sustainable Design	
Nairn		Business and Industrial Land	
Tornagrain		Accessibility and Transport	x
Smaller Settlements in A96		Agricultural Land	
Caithness and North Sutherland	x	Subdivision of Existing Crofts	
Easter Ross and Nigg		Allocation of Inbye Land	
Development of Local Centres		New Crofting Township	
Wider Countryside and Fragile Areas		Small Scale New Crofts	
Population and Housing		Coastal Development	
Housing in the Countryside		Forestry and Woodland	
Affordable Housing		Minerals	
Planning for an Ageing Population		Open Space and Physical Activity	
Gypsies/Travellers		Access to the Outdoors	
Retailing		Comments on Consultation Process (+ve)	
Developer Contributions		Comments on Consultation Process (-ve)	
Natural, Built and Cultural Heritage			

Key:

Background	**Spatial Strategy**	**Policy Options**	**Consultation**

Notes:

Looking for Gill's Harbour to be included in plan for Caithness & North Sutherland
Any land allocations should be looked at in the Caithness & Sutherland LDP

Action Sheet Completed by:	SH
Date:	8/12/09

Stuart Black, Esq.,
Director of Planning& Development,
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INVERNESS IV3 5BR.

Dear Mr Black,

HIGHLAND-WIDE LOCAL DEVELOPMENT PLAN: DRAFT: GILLS HARBOUR, NE CAITHNESS.

I write as a trustee/director on behalf of Gills Harbour Ltd, the recently-incorporated operators of the community-owned small port on the shores of the Pentland Firth, c. 6 miles west of John O'Groats. It is the agreed successor-body to the long-established Gills Harbour Association; at present our lawyer is completing the necessary property etc. transfers.

The body owns the Gill Harbour, which consists of two parts; (a) an enclosed Inner Basin that we are in the process of having deepened plus (b) the ferry terminal (incl. vehicle marshalling area/ ferry link-span/terminal/ferry berth/breakwater + terminal buildings) for Pentland Ferries Ltd, with whom we have a PPP-style agreement.

In association with us (as landowners to the historic low water springs mark) and with the Crown Estate Commissioners, (as seabed proprietors) Pentland Ferries has enhanced the main 4 m. deep entrance channel and emplaced a 100 m long breakwater/ferry berth on a levelled sea-bed. It is formed from a recycled, strengthened former floating dry-dock, subsequently in-filled with rock and externally armoured etc.

This is being written in response to the above document; on a personal note I was pleased to make your acquaintance at the recent Caithness Regeneration Conference in Wick, so you may be expecting written comments. I served for four terms as Councillor for NE Caithness (ward 5), so am familiar with the concepts of local authority 'Structure' & 'Local' Plans.

However, I am not fully clear what detail is required in the above document to shape the best and most efficient use of land (in this case, at and in the vicinity of the port) to meet national and local needs and aspirations. Indeed much of what exists at Gills Harbour today closely resembles what was approved in your predecessor E Caithness Local Plan, 1987.

I am thus taking the liberty of providing you with a bit more detail (and the reasoning behind it) than may be required for preparation of a traditional Structure Plan; if you feel that you, or a member of your team, would like an early Gills Harbour site meeting with us, then I am sure that we can make arrangements at reasonable notice.

We are pleased that your Council recognizes the great potential of tidal-stream marine renewable electricity that may be generated by harnessing the kinetic energy in the Pentland Firth's fast-moving tidal streams and so be able to plan effectively for the nascent industry.

The Eastern Pentland Firth is potentially the UK's biggest and most valuable single future source of 'green' energy and so could play an important part in helping achieve the Scottish and UK Governments' CO_2 reduction targets; its role could be significantly enhanced if the hypothesis proposed by the GHA's long-term treasurer Billy Magee is proven, as (broadly) looks likely. (see below).

However, we were surprised that Gills Harbour is not mentioned in the draft document, despite being by far the closest little port to the area in the narrowest Eastern end of the Pentland Firth (roughly the expanse correctly outlined in the 'Action Plan for Caithness' map on P. 25 of the document). It lies at the head of Gills Bay, well inside the Firth's Inner Sound tide-streams; it is also clear of swells originating in the North Sea, while the breakwater/berth provides protection from the prevailing Atlantic-origin westerly swells.

We trust that your 'local plan' team will be able to rectify this omission for the 'final' version of the Plan and we look forward to seeing a revised draft.

We believe that, for certain classes of vessels involved/likely to be engaged in this tidal-stream electricity project of national importance, Gills Harbour offers clear advantages to users over all other (Scottish) mainland ports; we know that this view is shared by some of the would-be tidal stream developers.

A main potential 'rival' could be the so-called 'Golden Wharf' at Lyness in Hoy, an ex-Admiralty war-time facility erected to allow capital ships to be brought alongside. It is now owned and operated by Orkney Council; last month it committed £3 million to upgrading this deep-water pier specifically to try to cater for Pentland Firth tidal stream developers.

From Gills Harbour small vessels of, say, 15m/20m length involved in conducting sea measurements (currents strengths, precise stream

directions and related time-variables), detailed sea-bed scanning surveys/analysis plus assessments of wave-heights/depths and their interaction with the tide-steams and wind-driven swells from across the Atlantic at various stages of the twice-daily rise and fall 'tidal regime', will soon be able to enjoy year-round all-tides access to/from here to all the major identified 'tidal stream' areas in the Firth.

Those are all concentrated in its narrowest Eastern end, as acknowledged in the page 25 map of your document; 'Action Plan for Caithness'; all stem directly from the ETSU (Energy Technology Support Unit, a spin-off from the UK Atomic Energy Authority based at Harwell, Oxon) study into the UK's potential for tidal stream electricity generation, published in 1993 and subsequently substantially verified.

We are currently having a one-off dredging exercise down to minus 1 metre LAT (lowest astronomical tide) conducted in our Inner Basin to meet this need. We have unencumbered ownership/control over this area; it is adjacent to the 8m wide Council slip road from the A 836, and so on to the UK main road network. We anticipate that this and other necessary (minor) enhancements to our Inner Basin will be completed by spring 2010. Our South Quay is adjacent to the slip-road.

This road to the ferry terminal carries much of Orkney's 'import/export' trade by articulated HGV trucks: (e.g. building supplies, groceries etc. inwards; 'vivier' shellfish trucks, live sheep, beef products and salmon outwards). Gills Harbour is the Mainland base for the 50 full-time job equivalent shore and ship-based officers and crews employed by Pentland Ferries, almost all of whom reside locally. This is the only un-subsidised year-round RO/RO service to Scotland's offshore islands.

It operates across the traditional 'short sea route' from NE Caithness to Orkney; the quickest and most sheltered route to the island group with St Margaret's Hope, its island terminus, being on Orkney's main road network, via the Churchill Barriers. In contrast, the longer, more exposed route across the Western entrance to the Firth to Orkney operated by North Link Ferries, part of the state shipping line, gets c. £10 million in annual taxpayers' subsidy, guaranteed until 2012, to 'keep it afloat'.

The ex-Gills service now uses the brand-new £10 million catamaran vessel *Pentalina.* She can take advantage of 'lee shore'/tidal eddies from the mid-Firth isles of Stroma and Swona on her thrice-daily 15-mile passage.

Pentland Ferries, whose MD is Andrew Banks, of St Margaret's Hope, has financed the new ship and substantial ferry berthing enhancements by re-investing revenue earned on this popular route. His business acumen

had been widely admired in the Scottish transport industry and beyond; it could be an important 'plus' in attracting private-sector tidal-stream developers to Gills.

At present, the Inner Basin provides only part-tide access during the fortnightly springs. The deepening will solve this constraint. This is being done, using our own (modest) funds, to address the expressed requirements of tidal stream developers; we have not yet accessed any taxpayers' funds for this, but we would like 'to keep this door open'.

This is why it is necessary that the most convenient port on the Scottish mainland for the nearby potentially-exploitable E Pentland Firth tide-streams is specifically mentioned in your Council's medium-term Plan.

The biggest mobile cranes available in Caithness can also use the Gills Harbour council access road; recently an operator lifted a 15 m. tender boat on to our adjacent South Quay for prop-shaft repairs etc.

The convenience of a Gills Harbour base is underlined by pointing out that using it will enable year-round access for vessels as above without the need of transitting the 'broken waters' (i.e. in layman's language 'rough seas') of the two main tidal races on the Pentland Firth's southern side.

Those are (a) The Merry Men of Mey, which starts on each twice-daily ebb-tide just west of West of St. John's Point, Gills Bay's western extremity, and fans during the next six hours outwards as broken seas from there towards Hoy during this west-flowing stream plus (b) The Bores of Duncansby, which 'works' on the daily 12 hours of east-flowing floodtide, and is the twice-daily confused area of breaking waves easily seen in even the calmest days from John O'Groats.

This is the so-called 'Hell's Mouth' that BBC 2 is publicizing this week with the screening next Sunday (18.10.08) of a documentary of Dundee athlete Frank Chalmers' bid to be the first man to swim across Pentland Firth; he used Stroma-born Skipper Willie Bremner as a tidal-stream pilot.

Being based at Gills will ensure superior safety for on-board crews/engineers/technicians and better comfort for those research-boat seafarers; this will lead on to enhanced productivity.

The tide-races can be vicious at times when a heavy swell from the prevailing Westerly quarter is running; small boats are advised to avoid them to reduce risks.

At the first 'Caithness after Dounreay' Conference, the then Energy

Minister Rt. Hon. Malcolm Wicks publicly pledged taxpayers' money support for generic Pentland Firth tidal energy research, as against providing support for device developers, as previously.

Amongst the academic/research bodies involved are the Environmental Research Institute, part of the University of the Highlands and Islands project at Thurso, which often co-operates with other academic institutes etc. in its studies. Its research catamaran *Aurora* is normally based at Gills, with one of our members Willie Simpson as skipper; the Simpson family own nearby Stroma island, that they use as a sheep-farm etc.

The residual knowledge base about the detailed timings, strengths and variables of the tide-streams in the areas being presently subject to licensing by the Commissioners of the Crown Estate lies with small-boat sailors here and in other coastal parts of NE Caithness; Willie Simpson and Billy Magee are amongst the most knowledgeable of the present generation and their expertise has been/is being regularly sought by researchers as well as several would-be developers.

This expertise peaked in Victorian times when skilled local pilots used small sailing/rowing 'yoles' to access windjammers, and so played a key part in the ensuring the flow of commerce from E to W coast Britain, plus from the former and from much of NW Europe to/from North America and beyond.

The Pentland Firth pilots learned to extract every ounce of forward movement from the tide-streams at all different stages of the twice-daily tide cycle and in almost all weather and swell conditions to safely guide their 'cargo-ship charges' through the channel; they knew that, by tacking in the narrow confines of the Firth, they could guide those sailing-ships against the wind, but never proceed against a tide-stream. This was important in the era before certificated ships' masters. It was enforced by marine insurers, who insisted on local pilots being hired for Pentland Firth transits, on pain of refusing cover otherwise.

As well as pilotage, cod fishing by hand-line during 'slack water' (for salt-dried export to S. Europe) from the ubiquitous wooden wide-painted 'yoles' (5 to 6 m long, with Viking era antecedents) was a past staple of the local economy here; again detailed knowledge of the tide-streams in ever-varying wind and swell conditions was essential for livelihoods; only during the tide-turn could the fishing line be dropped plumb to the 'catching zone' a few metres above the sea-floor.

There is known to be a wide variation in the times of 'high water' in very short distances both along the southern shores of the Firth and

outwards from the coast; the Magee Hypothesis suggests that this variation can be utilised, by judicially emplacing arrays, so that round-the-clock electricity generation becomes possible.

Billy Magee is one of only a handful of persons with a lifetime's experience of using (motorised) yoles in those waters. An important aim of the multi-million pound research programme currently under way is retrieving the 19th C. knowledge by electronic means and adding to it with details of the sea-bed topography and other factors (i.e. suspended solids in the tidal stream flows); all necessary before any generating device deployment takes place.

As a Fellow of the Energy Institute, I am well aware that round-the-clock 'base-load' electricity (which does not need back-up generation) is more valuable than even the predictable power output that might be normally expected from tidal stream electricity, (i.e. if there was to be zero generation on the tide-turn periods).

We believe that winter research and development activity is essential for Pentland Firth tidal stream electricity to reach its hoped-for fruition; this adds to Gills Harbour's attractiveness as a base for vessels as above, as clearly the tide-races (Men of Mey, Bores etc.) are at their most potentially-vicious in the windiest season, when sea-swells are at a maximum and daylight hours are short.

Several past coastal developments in Caithness that went ahead without prior (or inadequate) winter-season studies, have gone badly wrong; those include the collapse in a storm of the Wick Bay Breakwater project of the 1870s, from which Wick's economy has arguably never recovered.

More recent lessons from history involved the multi-million pound cost of retrofitted measures needed to combat the massive seaweed ingress into the main Dounreay Prototype Fast Reactor (PFR) seawater coolant intake in the early 1980s.

In 1997, there was the destruction of the 'Osprey' wave-power device emplaced by Inverness company Wavegen off Dounreay, which broke up in moderate swells before a single unit of electricity had been generated.

This arguably put the development of wave-power back by some years; the most promising concepts, now under test, use different technologies, such as the Pelamis 'sea-snake' fabricated at Stornoway and the near-shore sea-bed mounted 'Oyster' system.

Constructed by Islesburn Engineering at Evanton, Easter Ross,

Oyster has wave-activated pistons to hydraulically pressurize a piped fresh-water 'column' to the shore, where conventional hydro-electric technology is used; Oyster is currently under test at the EMEC (European Marine Energy Centre) facility at Stromness, Orkney.

Despite 'wave power' and 'tidal stream' often being linked as 'marine renewables' (and sometimes confused in the public mind), we at Gills have had no inquiries about the former.

It is generally thought that wave power will find near-shore conditions more favourable to the West of Thurso Bay and thence along the N Caithness and N Sutherland coasts, while the 'sea-snakes' devices will have to be placed well outwith shipping lanes to the Pentland Firth's western approaches.

The prospect of a multi-billion pound eventual boost and non-polluting electricity generation on a very large scale to the economies of Caithness, Highland, Scotland and the UK and the added possibility that E Pentland Firth tidal stream developments could replace skilled Dounreay energy employment as a key 'economic driver' here, as well as encouraging innovative engineering locally, is too great to be put at risk by inadequate preparation; and that means winter studies/works/ inspections.

Britain is not the only country looking towards tidal stream for future 'green power'; but the presence of the world-scale resources of the Eastern Firth's streams, all easily accessible from Gills Harbour, without the need to cross tide-races, could give it an edge.

It is only in winter that the depth of the Firth's water column affected by heavy swells, or the preponderance (or otherwise) of suspended solids (from sand to seaware and flotsam) can be tested. All world tidal-stream generating devices at present are prototypes; there is a widespread belief in the industry that successful deployment/proving over several winter seasons (perhaps 5 years) in Pentland Firth will be necessary before large-scale arrays are emplaced there.

The detailed scale of the Firth's renewable electricity potential cannot be accurately predicted until those and other questions are answered, although it is generally thought to be in the region of 6,000 to 10,000 MW. (perhaps the equivalent to 6 to 8 nuclear or coal-fired power stations).

If round-the-clock generation proves difficult or impossible, that implies back-up 'pumped hydro' storage, most likely in the Great Glen, as with the predominantly 'uphill-pumped, secondary hydro' power station at Foyers, on Loch Ness-side. It was built in the early 1970s as the 'twin' of

Dounreay PFR, (250 MW) where generation output was known in advance to be variable. (to allow for scientific/engineering experiments to take place).

All energy costs are closely related to the world oil price; thanks to intervention of taxpayers' monies collected by the UK Government, the pace of tidal stream development has not slackened. But it would be naïve to expect that the global recession will have no effect with the world oil price halving over the past 18 months plus, as stated in the *Financial Times* of 12.10.09, 'the falling price of carbon (under the EU's emissions trading scheme) is bad for green investment ... which is vital to hitting emissions targets'.

We have been represented at the All-Energy exhibition/conference at Aberdeen for the past three years; we have been told by tidal stream device developers and energy producers of the clear trend towards packing more equipment into smaller, but more powerful, research and service vessels, as has recently also happened with fishing boats and salmon farm tenders.

This all adds to the advantages of Gills Harbour as a base.

We believe that works done at Gills Harbour here over the past 20 years, by our PPP-style partner, and ourselves have been cost-effective; we are not people who dream of 'fantastical, mega-bucks' schemes paid for by others.

We believe that it may be (economically) possible to build a possible new quay on the North side of the Inner Basin's breakwater, which would give a guaranteed depth of c. minus 3m LAT, gaining its shelter from the ferry breakwater/berth.

Last month, Mr Andrew Banks told us he had been approached by a would-be tidal stream developer, confident of being chosen by the Crown Estate in its Pentland Firth seabed leases scheme, enquiring about vessel access to the main ferry breakwater (when not otherwise in use), where there is guaranteed depth of c. minus 4m.

Over the coming decade, taxpayers' funds will be at a premium and will need to be utilised as judicially as possible; we are mindful of the potential pain, as outlined last week by regulator OFGEM, (Office of the Gas & Electricity Markets) of the higher household energy prices that a substantial switch-over to low $C0_2$ electricity will mean for consumers on low fixed incomes.

Thus Pentland Firth tidal stream electricity will have to shows signs of generating costs capable of being brought down to a level broadly in line

with those of onshore wind, at present the most 'economical' method of producing 'green' electricity.

The linking-up of a series of arrays, emplaced at different parts of the Eastern Firth, implies a 'hub' for electricity collection/transmission; maybe at/near Gills Harbour or on Stroma Island. Perhaps this is a matter that your department's staff may wish to consider.

In its early years, the proposed replacement of the 132,000kV Beauly to Denny electricity line by one of 400,000kV is a 'sine qua non' of E Pentland Firth generation.

It is thought in the industry that it could take as long as a decade for a high voltage, direct current cable to be laid from here on the seabed down Britain's East coast to the main UK electricity markets.

Willie Simpson (see above) is naturally and properly concerned with what he calls 'an exclusion zone' recently designated around the family-owned island; he is referring to the 'Special Protection Area' declared by Scottish Natural Heritage to supposedly protect sea birds.

This was done despite his family, the Gills Harbour Association and the local Community Council all strongly lobbying against the then draft proposal, that we all felt would 'send an unwelcome signal' to potential developers, while doing nothing for seabirds' welfare. We would anticipate Council support in ensuring that this designation does not impede developments.

The strong possibility that there could be a surplus of 'green' Pentland Firth electricity available locally, especially in the early years, should be seen as an opportunity, not a disadvantage. Already there is talk of an energy-hungry computer data-processing complex at nearby Mey; heat for 'polytunnel' horticulture is a possibility, or the cultivation of specialist algae, or even hydrogen, as future fuels.

We were also disappointed by the visual representation of tide-stream devices in your document; although the Pentland Firth lies entirely within Britain's 'territorial sea', merchant ships of all nations have 'a right of free passage' under the United Nations protocol to which our Government is a signatory through the IMO (International Maritime Organisation), the only UN agency based in the UK at London.

Far from 'poking' above the sea-level, with the cliffs of Hoy in the background (as illustrated), this means that any device must leave a clearance depth of at least 15 m and possibly 20 m to accommodate maximum draught of known shipping, up to VLCC (supertanker) size.

It should not be thought that obtaining a 'derogation' from the protocol would be simple; Chinese, Iranian and Indian vessels regularly transit the Firth, and their Governments' agreement would be needed for any UN-approved variation/relaxation. This may, however be just possible for the Inner sound, between here and Stroma, as it is classified as a secondary through channel.

As you will have gathered, we (and others in the industry) believe that it is essential Gills Harbour is properly recognised/designated in your Plan for its future role in E Pentland Firth tidal stream electricity generation, and appropriately zoned for related marine activities.

We have been talking to our partner Pentland Ferries about replacing the existing 'portakabin'-style terminal buildings, on our land, with a new ferry office, waiting room, public toilets and cafeteria (for franchise).

We have also been talking to the company about the desirability of office/ tidal stream instrument storage space, plus facilities for our own needs, as part of this proposed new building. We anticipate that planning application for this could be lodged within months; we have had very preliminary discussions with the Nuclear Decommissioning Agency/ Highlands and Islands Enterprise over funding.

The original 140 yard-long Gills Pier was built just over a Century ago (1905), as the first stage of a proposed 'streamer terminus for the Orkney trade' under an 1897 Parliamentary Act (an adjunct to the 1886 Crofting Scotland Act) that was specifically designed to diversify employment in rural crofting areas, such as Gills is/was. It was one of around 20 pier/harbours approved for Highlands & Islands ferry services at that time, almost all others being on the West Coast.

It was in those Edwardian times that playwright/philosopher George Bernard Shaw first drew attention (in a Fabian Society booklet) to the power resources of the Pentland Firth that he had observed while crossing on the mail steamer to Scapa Bay (Kirkwall) for Orkney trout fishing holidays. He thought that its electricity output could one day spare miners the drudgery of dark, unhealthy, underground coal 'howking'.

The technology then did not exist, but now it is within touching distance.

We are charged under our new 'Memorandum of Association' (of Gills Harbour Ltd) of managing/developing it 'for the encouragement of employment through trade, commerce, industry, transport energy and marine activities including leisure) at, or in the vicinity of, the harbour'.

This closely resembles the aims of 1905.

Almost two centuries before (early 1700s) Gills Bay played an important role in Britain's first 'Industrial Revolution' for supplying blocks of semi-manufactured 'soda ash' from here, an essential ingredient of 'fast' dyes for the textile industry, as well as necessary for the mass production manufacture of glass and soap; the product was made from seaweed harvested from the Gills Bay inter-tidal zone, cut, dried and liquefied in kilns here and then allowed to solidify, before broken up for onward shipping.

Nearly 300 years later, we are determined that Gills Harbour takes its rightful place close to the heart of Britain's new 'green energy' revolution in the nearby E Pentland Firth and we look to your Council's full support in this aim.

Yours sincerely,

[redacted]

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[redacted]

13.10.09