Planning Policy Team

Infrastructure Services

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Dear Sirs

Your Reference: LDP 2021 NN

With regards to the Proposed Local Development Plan for the Formartine area, I would like to object to removal of a land parcel, to the north of Potterton from the greenbelt and subsequent 233 house development being proposed for the area. My objection is based on concerns of future supply and demand for housing within the Aberdeen area, adequate supply of schooling and encroachment upon the greenbelt. I should state that I am a consultant petroleum engineer, with over 40 years' experience of North Sea developments and infrastructure. I have lived in Potterton for the last 35 years.

The Decline in the Oil Industry.

Aberdeen and the surrounding communities have grown exponentially over the last 30-40 years, based on a thriving oil industry. During that period, the oil industry has weathered several downturns largely due to commodity prices. The oil industry is now facing a longer-term threat in that oil and gas are finite resources, eventually they will all cease to produce. All hydrocarbon basins (or individual fields) develop in exactly the same way, no matter where you are in the world. There is an initial steep rise in production as exploration and infrastructure development (platforms and pipelines) accelerate followed by a plateau period where the same pipelines and platform equipment (compressors, pumps, separators) act as a choke, limiting maximum production. Finally, the production profile enters a period of exponential decline, due to declining reservoir pressure combined with water and gas breakthrough.

The following graph exemplifies this model within the North Sea. From 1975 to 1985 production was rising as platforms and pipelines were being constructed. From 1985 to 2000 the North Sea was in its plateau period and since then the area has been in its decline phase.



Fig 1 UK North Sea Daily Oil Production

Source: https://data-ogauthority.opendata.arcgis.com/pages/production

A small hiatus has occurred since 2017 due to the Clair Ridge platform and Schiehallion redevelopment. However, observation of the following graphs show that the normal decline will swiftly be resumed.



Fig 2 Clair Ridge Daily Oil Production



Fig 3 Schiehallion Daily Oil Production

Although the North Sea oil production will not disappear overnight as in the closure of a coal mine, the exponential decline seen in the first graph can be expected to resume its normal trend of 5% per annum soon, when Clair and Schiehallion come off plateau. Current production levels of 1MMbbls/day are only 40% of the peak production of 2.5MMbbls/day in 2000.

Allied to the drop in production, it should be noted that the oil majors no longer consider the North Sea to be an area worth investing in. **Sector 1** has given up its operatorships here, while **Sector**, and **Sector** have effectively withdrawn from the area. **Sector** and **Sector** have sold many of their assets, concentrating on a few higher producing fields. It is anticipated that as these fields decline, and **Sector** will also withdraw completely from the North Sea. Although some of the assets have been purchased by smaller companies, these companies necessarily run "lean and mean" operations to extract the last few economic barrels. This necessarily means lower headcounts, both onshore and offshore.

In recent years, particularly with the current low oil price, many of the oilfields have reached their economic limit and have been shut in and are being actively decommissioned or applications have been made for decommissioning: -

Argyll	
Beatrice	

Brent (3 out of 4 platforms removed).

Buchan

Brae East & Bravo

Cormorant Alpha & North Cormorant Curlew Fulmar Heather Hutton Huntington Goldeneye MacCulloch Miller Murchison Ninian North Tartan

Thistle

Source: https://itportal.ogauthority.co.uk/pathfinder/decommissioningindex.html

The above list includes only the oil and gas platforms which are serviced out of Aberdeen. It does not include the various subsea fields attached into these platforms, nor the Southern Gas basin fields also being decommissioned. A typical oil platform will have a crew of 150-200 people per shift in total. Each platform will have two shifts per month. My own work in the oil industry also indicates that there will be many other fields will reach their economic limits in the next 5-10 years.

With the oil downturn, it is no longer economic to pay rates on offices in Aberdeen, as there is some 1MM Sq. ft of spare office space currently available. Many companies have resorted to demolishing their headquarter buildings. I can think of the **Section Section** building in Claymore Drive, the old HQ in Altens and the old Exhibition Centre as prime examples. Two of these buildings are in the Formartine school catchment area and although I have not seen plans, I can only assume such valuable brown field real estate will be developed into housing estates very soon. This will have an impact on available schooling in the area.

Allied to the downturn in the oil industry, the country will be affected by the withdrawal from the European Union at the end of the year. I don't think any one can predict exactly how this will translate in to the job market in the Aberdeen area, but it is realistic to assume that we will experience far fewer EU migrants coming to work here in the future, along with a reduced number of EU students, now that they will have to pay University fees. The Covid-19 outbreak will also have a long-term impact

with many of the local shops, hotels, pubs, and restaurants not reopening. This again will have an impact on the housing market.

Decommissioning activity will largely bypass the Aberdeen area as it requires a deep water sheltered port, as shown by the current activities in Invergordon, Dundee, Hartlepool and abroad. Aberdeen harbour is too shallow and congested to undertake these industries.

Although a large increase in the offshore wind industry can be expected in the next few years, construction activities will remain at the current sites at Burntisland, Lewis, Denmark and the Middle East. Maintenance activities will be conducted locally to the many windfarm sites. Few jobs will come to Aberdeen.

The Supply of Future Housing in the Formartine Area.

A series of housing developments in the Formartine and nearby areas have already been allocated or approved by Councillors in both Aberdeenshire and Aberdeen City. I list here the developments that will affect schools where children from Potterton are likely to attend, such as Bridge of Don Academy, Oldmachar Academy, Ellon Academy and Balmedie Primary School:-

Menie Estate	550 houses
Blackdog	600 houses
Pitmedden	74 Houses
Cloverhill	550-600 Houses
Grandholm	4700 houses.
Balmedie and Belhelvie 210 Houses	

Ellon, Newburgh etc 1270 Houses

A total of 8004 houses have already approved or allocated to land in the vicinity. This does not include the brownfield sites in the Bridge of Don that I discussed above.

Assuming that each household has the national average of 1.9 children each, that means over 15,000 children will have to be accommodated in the above schools.

In conclusion, I think that you can see that the future of the oil industry in the North Sea looks bleak, as we are dealing with a finite resource, nearing the end of its life. Oil production will continue to drop and oil field jobs will move to other areas of the world. Working people will follow the jobs and population will drop in the Aberdeen area. We already have a large approved supply of 8000 houses in the Formartine/Bridge of Don area. Adding a further 233 houses to that approved list, has a high likelihood of producing a housing estate that will remain half finished or worse still, empty houses. The estates of the former mining communities in South Wales and Yorkshire are a living reminder how communities remain blighted, even 50 years after their coal pits closed. On these grounds, I must object to this removal of land from the green belt and potential housing development in Potterton.

Regards