KEMNAY COMMUNITY COUNCIL

FORMAL REQUEST FOR KEMNAY FLOOD RISK ASSESSMENT COVERING CAUSE, IMPACT AND SOLUTIONS

Attachment 2 – Report (08.07.2016)

With regards to the extreme floods that occurred in Kemnay on 7-8 January 2016 as a result of Storm Frank and with reference to three different areas of Kemnay which were affected, namely, Milton Meadows, Kembhill Park (including part of Alehousewells and Primary School), and Fyfe Park / Stewart Crescent / Victoria Terrace.

Following is our understanding of some of the events which took place during the floods in each of the three aforementioned areas, where we believe that, in each case, the cause of flooding was distinctly different:

1 MILTON MEADOWS (see Figs. 12 & 13) The main cause of flooding in Milton Meadows was attributed to surface water road gullies backing up as a result of River Don level rising above the outflow level of the road gullies. In addition, the lack of regular maintenance to the gullies hindered the ability of the gullies to cope with the volume of water and its ability to remove the flood threat. However, the level of River Don came close to a height that would have caused flooding to extend further and beyond the estate, thereby potentially causing a disaster of greater magnitude. The sewage pumping station proved to be inadequate during this event and requires to be either upgraded or a suitable solution found. Potential flooding and drainage problems were brought to the attention of former Gordon District Council in December 1996 when Kemnay Community Council commented on planning application 96/1261/01. Reference was made to photographic evidence of flooding in early 1995 and residents' concerns that the culverted drain running along the boundary between the existing development and the proposed development was inadequate and unable to cope with storm water (see Fig. 11).

2 KEMBHILL PARK (see Figs. 14 & 15) Flooding occurred here due to the River Don initially flowing through a gap in the flood bund between the existing flood bund and the wire mesh boundary fence surrounding the Sewage Pumping Station. The Pumping Station was eventually overwhelmed and there were reports of raw sewage escaping out onto public open spaces, roads and residential properties. A considerable number of houses experienced further flooding when toilets backed up and flooded the interior of the houses, which suggests that the houses in Kembhill Park drain to a combined sewer. Further flooding occurred just north of Kembhill Park just beyond the flood bund where the River Don burst its banks and flooded onto the football pitch and continued south to flood a number of residential properties in Bremner Way as well as Alehousewells Primary School. See Fig. 1 showing the approximate area of flooding, the gap in flood bund plus the existing and additional flood bund requirements.

3 FYFE PARK / STEWART CRESCENT / VICTORIA TERRACE The January 2016 flooding in these areas would appear to be related to inadequate sewer capacity in Victoria Terrace and some detail of the historical flooding events over the years follows. There are a number of measures that

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Aberdeenshire Council could implement without any need to commit any major capital expenditure; the flooding problems at Victoria Terrace have been occurring since at least 1980 and it is acknowledged that the sewers in Victoria Terrace are inadequate (see Fig. 9). However, the flooding in this area could easily be mitigated by a routine planned maintenance programme and a commitment to clearing the partial obstruction that exists in the surface water sewer somewhere between Parkhill and Bogbeth Park. Therefore, in addition to our formal request for a Flood Risk Assessment, we also request the urgent action to be taken under Short Term Requirements below.

Historical Issues

Flooding in Victoria Terrace has been occurring for many years, certainly since the 1980's but some reports go back further to the 1970's and indeed further back. The area shaded blue, on the 1959 OS map of Kemnay below, indicates roughly an area of farmland that has historically been prone to flooding (see Fig. 10). This has indisputably been an area susceptible to flooding and at some time between 1980 and 1985, the owner of the farmland carried out extensive engineering works, grading, levelling and draining the site. However, during periods of heavy prolonged rainfall or during melting winter snows, the site continued to flood.

In March 1985, Kemnay Community Council held elections and Alistair Stephen, owner of Kirkstyle Garage, joined the Community Council to raise the profile of the frequent flooding in his Garage, which is located in Victoria Terrace. In January 1986 the flooding problem at Victoria Terrace was brought to the attention of both Grampian Regional Council Roads Department and Water Services committees. The initial minimum remedy was that the section of pipe at the bottom of Parkhill would be opened up by end of March 1986 and at the same time plans would be prepared for an application to The Scottish Office for implementation of a Flood Prevention Scheme. In June 1986 former Grampian Regional Council-were on the verge of issuing a flood prevention order to resolve the serious flooding that constantly occurred in Victoria Terrace. During 1986 investigative and maintenance work was carried out but no major works took place to resolve the problem.

As pointed out above, this has been a long lasting historical problem acknowledged by former Grampian Regional Council and Gordon District Councils in 1993 (see Fig. 9). Although GRC and GDC accepted that the sewers were inadequate, 96 houses were built at Kirkstyle in 1997 utilising a SUDS. Due to the inadequate sewers in Victoria Terrace, foul sewage is pumped over the hill to the STW and surface water drained to individual soakaways with the addition of a large soakaway sited to the east of Fyfe Park. In 2011 a further 54 houses were built east of Fyfe Park, again using a SUDS with the addition of two Detention Basins, which discharge into the acknowledged inadequate sewage infrastructure in Victoria Terrace (see Fig.3).

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In December 2013, prior to completion of this development, there was serious flooding of the lower southern part of the site. At the time, unusual weather conditions prevailed, the ground had been frozen solid for a prolonged period, which was followed by prolonged heavy rainfall. The frozen ground conditions could not absorb the rain, which just drained down the hill and accumulated in the historically flooded area adjacent to the B993. Kemnay Community Council reported the flooding to Aberdeenshire Council and supplied photographic evidence (see Fig. 2) but the remaining 7 houses were still constructed. On the day of the floods, the sewers in Victoria Terrace were overwhelmed with the amount of surface water and in consequence both Detention Basins overflowed resulting in flooding at Stewart Crescent and the junction at Fyfe Park / Victoria Terrace. In addition, road gullies backed up at the historic flooding site at Kirkstyle Garage, Victoria Terrace, flooding the Garage and other properties further east along Victoria Terrace. Post flood attempts were made to clear the surface water sewer, but it became apparent the there is an obstruction somewhere between Parkhill and Bogbeth Road.

Current Situation

The North East Local Flood Risk Management Plan (LFRMP) has been produced under the Flood Risk Management (Scotland) Act 2009, which provides a strategic framework for considering appropriate mechanisms to manage flood risk across Scotland. Covering the period from 2016-22, it addresses Potentially Vulnerable Areas (PVAs) in Aberdeenshire, Aberdeen City, and parts of Moray and the Cairngorms National Park area. A range of measures to reduce risk have now been set out for 23 PVAs across the North East Local Plan District.

Unfortunately, Kemnay has been excluded from this LFRMP due to the fact that SEPA did not designate Kemnay as a PVA. SEPA has acknowledged that due to an oversight, the so called “gap” in the flood bund at Kembhill Park was not noticed by survey officers and therefore not recorded as a potential vulnerability. SEPA has confirmed that despite this oversight, Kemnay will not be considered for PVA designation until after the lapse of the present LFRMP which is 2022. Kemnay is therefore unfairly disadvantaged due to an acknowledged oversight combined with an inflexible LFRMP which cannot consider new material evidence.

Short Term Requirements

In addition to our formal request for a Flood Risk Assessment, we also request the following urgent action to be taken:

1. Flood Risk Assessment to establish cause, impact and recommended solutions.
2. Suitable temporary flood defence measures for Milton Meadows and Kembhill Park including:
a) **Temporary Flood Barriers**; (taking into consideration that, due to the type of construction, some properties are unable to have effective Property Flood Defence Products installed),

such as “Water Gates” as suggested by Malcolm Thomson **of the AC Flooding and Coast Protection Infrastructure Services Department** during a recent site visit. Any barriers provided should ensure that water can escape should drainage issues not be addressed under item 5 below and that water is not diverted to properties previously unaffected.
b) **Sandbags;** provision with stockpile storage - possibly at Birley Bush Depot
c) **One tonne sandbags** for emergency deployment

3. All **road gullies to be cleaned** at Milton Meadows, Kembhill Park, Stewart Crescent, Fyfe Park and Victoria Terrace,
4. **Camera surveys** at each location, under item 3 above, to ensure the gullies are clear and operational, especially where there is an acknowledged obstruction between Parkhill and Bogbeth Park.
5. Non Return Valves (such as duckbill); to be fitted to surface water road gully outfalls at Milton Meadows
6. Liaison with Scottish Water to:
a) replace the chain link boundary fence surrounding the Bremner Way Pumping Station with a blockwork wall capable of withstanding floodwater and thereby preventing the escape of raw sewage onto amenity areas and residential properties and
b) upgrade or replace the pumping station at Milton Meadows or provide an effective solution
7. Liaison and effective communication with Kemnay Community Council which is currently not taking place

Long Term Requirements

1. Additional flood bund at Kembhill Park (north and south), as indicated in red in Fig. 7. 2.
2. Investigation of possible mitigation measures that can be carried out further upriver along the River Don, which may be creation of floodplains to reduce the impact of flooding.
3. Creation of an ongoing maintenance programme to ensure that road gullies are clear and not obstructed.

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Fig. 1 Flooding at Kembhill Park showing existing bund and additional bund requirements

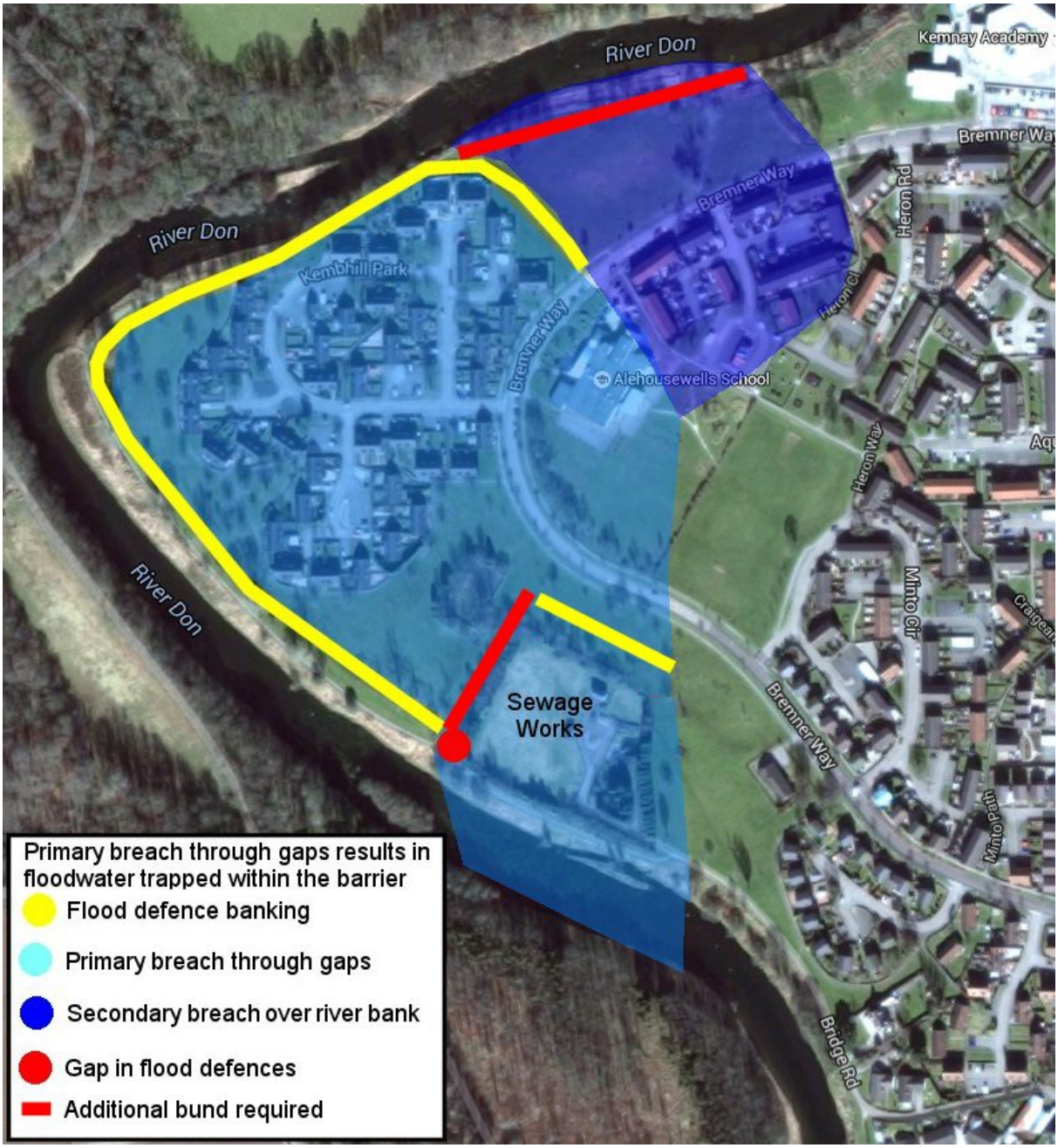

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Fig. 2 Flooding at Stewart Crescent in December 2013

Fig. 3 Detention Basins at Fyfe Park

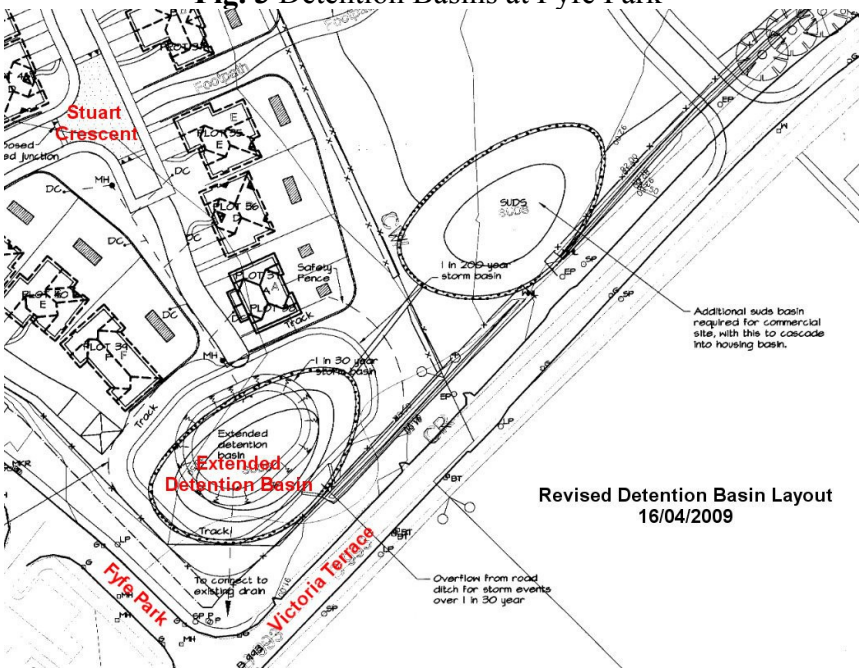


Fig. 4 Flooding at junction of Fyfe Park and Victoria Terrace January 2016

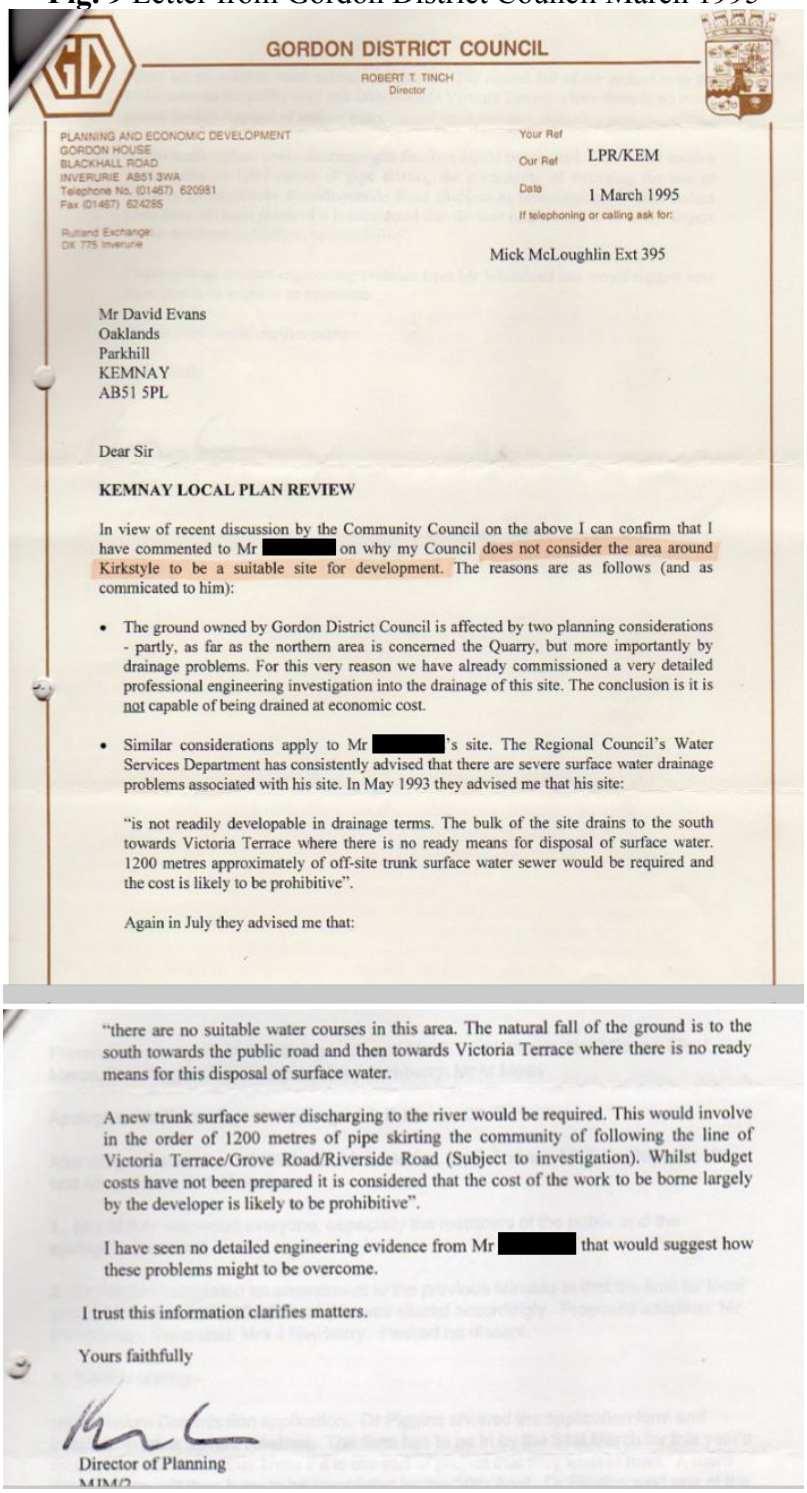
Fig. 5 Flooding at Fyfe Park / Victoria Terrace January 2016

Fig. 6 Flooding at Victoria Terrace January 2016

Fig. 7 Flooding at Victoria Terrace January 2016

Fig. 8 Flooding at Victoria Terrace January 2016

Fig. 9 Letter from Gordon District Council March 1995



GORDON DISTRICT COUNCIL

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Our Ref LPR/KEM
Date 1 March 1995
If telephoning or calling ask for:
Mick McLoughlin Ext 395

Mr David Evans
Oaklands
Parkhill
KEMNAY
AB51 5PL

Dear Sir

KEMNAY LOCAL PLAN REVIEW

In view of recent discussion by the Community Council on the above I can confirm that I have commented to Mr [redacted] on why my Council does not consider the area around Kirkstyle to be a suitable site for development. The reasons are as follows (and as commicated to him):

- The ground owned by Gordon District Council is affected by two planning considerations - partly, as far as the northern area is concerned the Quarry, but more importantly by drainage problems. For this very reason we have already commissioned a very detailed professional engineering investigation into the drainage of this site. The conclusion is it is not capable of being drained at economic cost.

- Similar considerations apply to Mr [redacted]'s site. The Regional Council's Water Services Department has consistently advised that there are severe surface water drainage problems associated with his site. In May 1993 they advised me that his site:

  "is not readily developable in drainage terms. The bulk of the site drains to the south towards Victoria Terrace where there is no ready means for disposal of surface water. 1200 metres approximately of off-site trunk surface water sewer would be required and the cost is likely to be prohibitive".

  Again in July they advised me that:

"there are no suitable water courses in this area. The natural fall of the ground is to the south towards the public road and then towards Victoria Terrace where there is no ready means for this disposal of surface water.

A new trunk surface sewer discharging to the river would be required. This would involve in the order of 1200 metres of pipe skirting the community of following the line of Victoria Terrace/Grove Road/Riverside Road (Subject to investigation). Whilst budget costs have not been prepared it is considered that the cost of the work to be borne largely by the developer is likely to be prohibitive".

I have seen no detailed engineering evidence from Mr [redacted] that would suggest how these problems might to be overcome.

I trust this information clarifies matters.

Yours faithfully

Director of Planning
MJM/2

Fig. 10 showing where historic flooding occurred

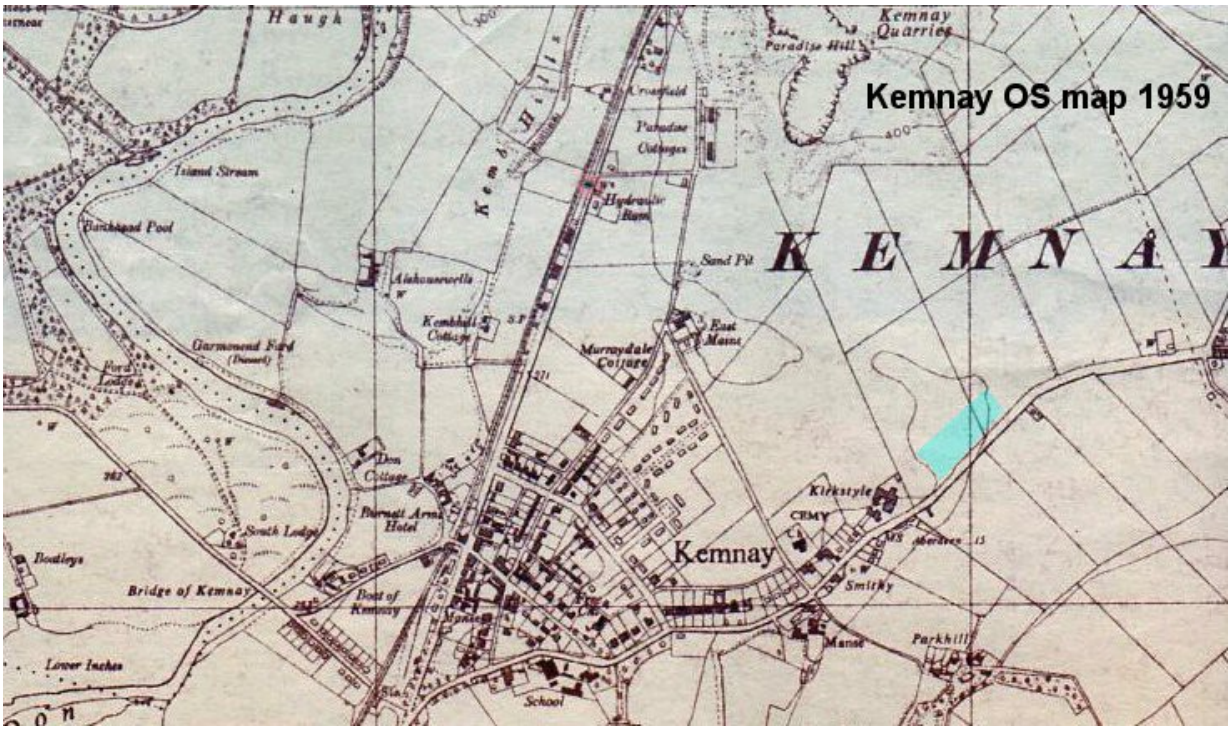

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Fig. 11 Letter from Kemnay Community Council re' Milton Meadows

Mrs S Shrago
Secretary
35 Paradise Road
Kemnay

03 December 1996

Director of Planning
Aberdeenshire Council
Gordon House
Blackhall Road
Inverurie, AB5 9WA

Dear Sir

RESIDENTIAL DEVELOPMENT PHASE 2, AT MILTON MEADOWS, KEMNAY
APPLICATION NO. 96/1261/01

The above application was discussed at our meeting of 28 November 1996 and we agreed to make the following comments regarding the proposals.

1. The proposals do not include a proportion of "Affordable Housing", which is a Local Plan requirement for development of this site.

2. The developer should fulfil the "Community Planning Obligation" by contributing towards one or more of the three projects identified in the Local Plan.

3. In early 1995, flood water from the river Don encroached substantially along the north western boundary of the site, as shown in the enclosed photographs provided by existing residents at the Milton Meadows development. Aberdeenshire Council should therefore consult with the Scottish Environmental Protection Agency to ensure that the developers proposals include flood prevention measures which may include substantial bunding, thereby ensuring that the development is afforded maximum protection from any future flood waters from the river Don.

4. Residents of the existing Milton Meadows development have stated that the culverted drain running along the boundary between the existing development and the proposed development is inadequate and unable to cope with storm water. This problem should be resolved prior to any further development of the proposed site.

Yours sincerely
David Evans pp Secretary KCC

Fig. 12 View of Milton Meadows from Kemnay Bridge

Fig. 13 Milton Meadows (courtesy of Aerial Aberdeen)

Fig. 14. Kembhill Park (courtesy of Aerial Aberdeen)

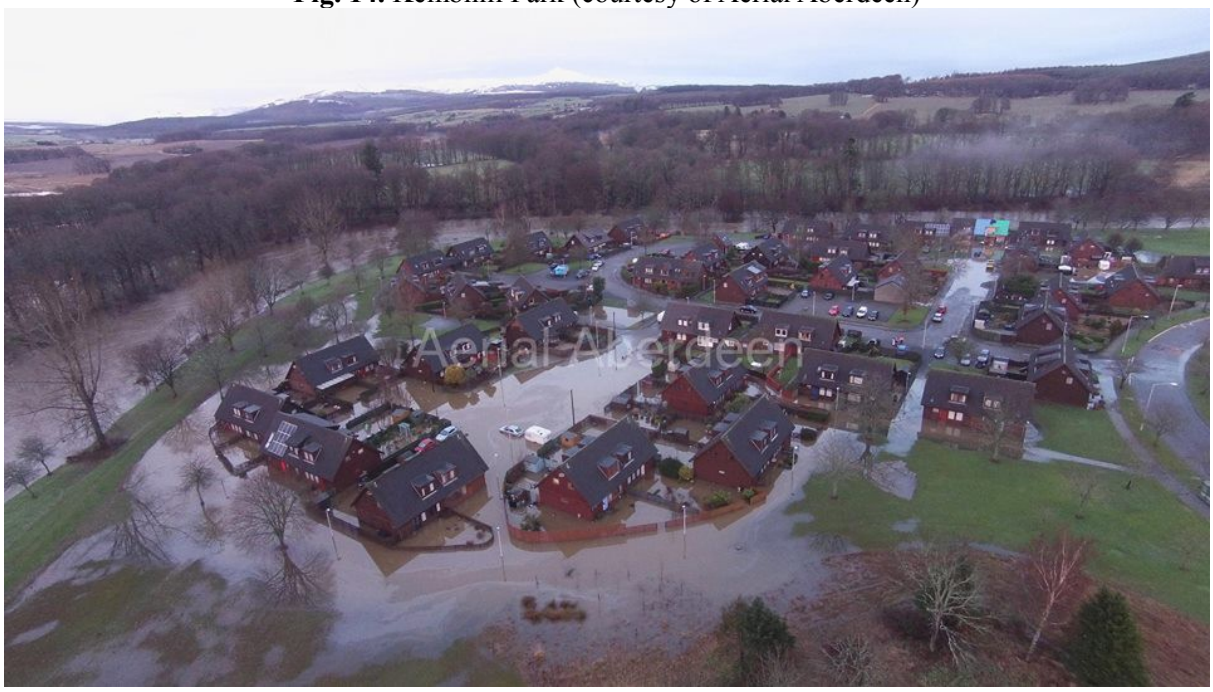

Fig. 15. Kembhill Park (courtesy of Aerial Aberdeen)