The final amount leaked could be four times the volume that has spewed into the sea in the past week

The Shell oil spill in the North Sea is already the worst in UK waters in the last decade – but the final amount leaked could be four times the volume that has spewed into the sea in the past week, the company admitted on Wednesday, if measures to dam the flow are not successful.

So far 218 tonnes of oil have already poured into the sea, with unknown effects on marine life, but Shell estimated on Wednesday that there could be up to 660 tonnes still remaining in the affected pipeline. Shell said there could be as much as 40% water in the pipeline however, which would mean much less oil remaining to leak out.

Hugh Shaw, the representative of the secretary of state who is working on the leak, said: "My view is that the oil leak is under control and has now been greatly reduced, as validated by remotely operated vehicle footage and government aerial surveillance flights. The priority now and over the coming days is to completely halt any further leakage in what is a complex environment."

The government said measures to minimise the damage could include a containment device, to be erected around the leak before further work takes place to remedy the problem, in order to ensure that no more oil is leaked during the clean-up operation. Building such a structure would take days if not weeks at least, but Scottish officials favour doing so to avoid the risk of further damaging spillage. Shell said: "Containment options are being progressed as a longer term option."

Conservation groups have raised concerns that the leak could harm marine life in the area around the Gannet platform, 112 miles east of Aberdeen, including sea birds and fish. Fishing fleets have been ordered to avoid the area, but the government is hopeful that lasting damage to marine life will be small, because the oil has been dispersed by the waves and is not expected to reach shore.

Green campaigners and Scottish politicians have also criticised Shell for being slow to publicise the problem and to release sufficient information on the progress of the containment operation.

Shell first discovered the leak last Wednesday, but did not make a public announcement until Friday evening. After the first leak was plugged, Shell found a problem with a relief valve that had opened up a secondary leak, whereby oil from the faulty pipeline was continuing to reach the sea. Although the pumping of oil into the pipeline has been halted, the residual oil remaining in the pipeline is now the main concern. Shell has still not been able to say why the leak occurred in the first place.

Glen Cayley, technical director of Shell's exploration and production activities in Europe, based in Aberdeen, said: "We are making good progress in stopping the leakage from the flowline to the Gannet platform. The flow rate [of oil into the sea] currently stands at less than one barrel a day."

About 1,300 barrels of oil are thought to have escaped from the leak in the first few days, making the spill the worst in UK waters for a decade. Last year's BP spill in the Gulf of Mexico was estimated to be spilling up to 70,000 barrels a day. Green campaigners said the spill

showed the danger of oil exploration, and called for an end to proposals to drill in the Arctic. Research by the Guardian has found that oil spills occur in the North Sea at the rate of about one a week, but most are not serious.

Divers and remotely operated vehicles have been dispatched to remove panels and gratings at the Gannet platform in order to assess the ability to close the leaking valve safely. Shell said that depressurising the line to stop the leak had led to the pipeline becoming more buoyant, meaning "rock mattresses" had to be used to secure it.

Cayley said: "I must stress again how much we regret this incident, that the situation is under control and we are working towards a swift solution. However, I cannot stress enough the need to undertake detailed risk assessments and ensure any work considered is undertaken safely."