

Report per Referral Area	28/02/2023 12:16		
Date	Upper Deel	Upper Deel (Newcastle West)	Upper Deel (No Upper Deel)
PAA Name	Deel (Newcastlewest) 020	Deel (Newcastlewest) 010	Deel 020
Waterbody name	Deel Process Upgrade		
Referral code			

Number of Farms Assessed	32	Issues in the Referral Area		
Dairy	10	P Loss (Diffuse)	Y	0
Cattle Breeding	8	N Loss (Diffuse)	0	N
Cattle Other	14	Sedimentation	Y	0
Sheep	0	Point Source Losses	0	Y
Tillage	0	Toxicity & Pesticides	Y	0
Mixed Farming	0	Ammonium	0	0
Other Enterprise	0			
Engaged	30	No. 1st visits		32
Not Engaged	2	No. 2nd visits		12
		No. 3rd visits		7
		No. 4th visits		1

Issue description
As per the desk study phosphate, ammonia and siltation of the river channel are the main issues. MCPA exceedances are an issue further downstream at Newcastle West Public Water Supply.

Issues found in the referral area during ASSAP visit:

		Risk 1	Risk 2	Risk 3
Farmyard Issues				
F1	Slurry Storage		1	3
F2	Silage Pits and Effluent Storage	4		
F3	Loose Housing and FYM Storage	7		
F4	Round Bale storage		2	2
F5	Dirty yards			
F6	Cattle &/or Sheep handling facilities			
F7	Clean & Grey Water management	1	2	
F8	Drain Connection from Yard to Water	3		
F9	Pesticide Storage and handling/Biesel/oil tanks			
F10	Other			
Land Management Issues				
LM1	P Loss Through Overland Flow	8	2	
LM2	N Leaching from Light Soils			
LM3	Sediment Loss	3		
LM4	Drinking Points & Stream Fencing	14	3	1
LM5	River Bank Erosion	1		
LM6	Drain Cleaning & Maintenance	4	12	2
LM7	Culverts/River Crossings	1		
LM8	Drinking Troughs	1	2	
LM9	Farm Roads and Gateways and underpass	2		
LM10	Unsuitable drainage delivering Nutrient and/or Sediment	1		
LM11	Field Boundary Management			
LM12	Bare Land - Inadequate Cover Crops			
LM13	Re-seeding Practices			
LM14	Losses from Tillage operations			
LM15	Supplementary Feeding and Sacrifice Paddocks	1		
LM16	Outwintering	1		1
LM17	Hill Land grazing			
LM18	Rock Outcrops/Karst Features			
LM19	Forestry		3	1
LM20	Herbicide / Pesticide and Sheep dip Use	3	2	1
LM21	Protection of Abstraction Points and Wells			
LM22	Invasive Vegetation			
LM23	Buffers	15	11	1
Nutrient Management Issues				
NMP1	Preparation and Implementation of NMP	6	7	
NMP2	Achieving appropriate Soil Fertility (Lime P&K)	1	3	2
NMP3	Identify and Manage Critical Source Areas			
NMP4	Organic Manure Timing, Location & Method	8	4	1
NMP5	Recorded Import/Export Organic Manures			1
NMP6	Timing - Early & Late N and Phosphorus	1	2	
NMP7	Fertiliser Rates		1	
NMP8	Correct Management of High OM soils			
NMP9	Sloped Fields			
NMP10	Chemical Fertiliser Spreading			
NMP11	Weather and Fertiliser Management			
NMP12	Fertiliser Type	3	1	
NMP13	Other			

Mitigation actions recommended in the referral area (note that few actions could have been recommended for one issue):

Mitigation Actions			Risk 1	Risk 1 - Agreed	Risk 1 - Not Agreed	Not Started	Not Proceeding	Commenced	Complete	Ongoing
Farmyard Issues										
F1	Slurry Storage	Additional storage for farm wastes required								
F1	Slurry Storage	Improved management of collection and storage of farm wastes								
F1	Slurry Storage	Separation of clean, grey, soiled and dirty water in farmyard								
F2	Silage Pits and Effluent Storage	Improved management of collection and storage of farm wastes			1	1				
F2	Silage Pits and Effluent Storage	Informing and educating farmers	1	1					1	
F2	Silage Pits and Effluent Storage	Separation of clean, grey, soiled and dirty water in farmyard	1					1		
F3	Loose Housing and FYM Storage	Additional storage for farm wastes required	1	1						
F3	Loose Housing and FYM Storage	Improved management of collection and storage of farm wastes	6	4	2	3	1	2		
F4	Round Bale storage	Additional storage for farm wastes required								
F4	Round Bale storage	Improved management of collection and storage of farm wastes								
F4	Round Bale storage	Informing and educating farmers								
F7	Clean & Grey Water management	Additional storage for farm wastes required	1	1			1			
F7	Clean & Grey Water management	Informing and educating farmers								
F8	Drain Connection from Yard to Water	Separation of clean, grey, soiled and dirty water in farmyard	3	2	1	1		2		
Land Management Issues										
LM1	P Loss Through Overland Flow	Management of Critical Source Areas (CSA's)	4	3	1	1	2		1	
LM1	P Loss Through Overland Flow	Riparian Buffers - Fenced/Unfenced	4	4		3		1		
LM3	Sediment Loss	Appropriate drain maintenance	1	1				1		
LM3	Sediment Loss	Riparian Buffers - Fenced/Unfenced	2	2		1		1		
LM4	Drinking Points & Stream Fencing	Prevent livestock access to waters	14	11	3	8		2	3	1
LM5	River Bank Erosion	Establish field boundaries and hedges	1	1		1				
LM6	Drain Cleaning & Maintenance	Allow grassed waterways and vegetated ditches	4	4		1		1		2
LM6	Drain Cleaning & Maintenance	Ditch/drain maintenance and management								
LM7	Culverts/River Crossings	Prevent livestock access to waters	1		1					
LM8	Drinking Troughs	Appropriate use of feeders/troughs/out-wintering								
LM8	Drinking Troughs	Management of Critical Source Areas (CSA's)	1	1		1				
LM9	Farm Roads and Gateways and underpass	Improved farm road/tracks design and location	2	2		1		1		
LM10	Unsuitable drainage delivering Nutrient and/or Sediment	Ditch/drain maintenance and management	1							
LM15	Supplementary Feeding and Sacrifice Paddocks	Management of Critical Source Areas (CSA's)	1	1		1				
LM16	Outwintering	Appropriate use of feeders/troughs/out-wintering	1	1						1
LM16	Outwintering	Extensification								
LM19	Forestry	Management of Critical Source Areas (CSA's)								
LM19	Forestry	Use of silt fences								
LM20	Herbicide / Pesticide and Sheep dip Use	Adhere to buffer zones and safeguard zones	2	2						2
LM20	Herbicide / Pesticide and Sheep dip Use	Educate and encourage behavioural change in the use of all herbicides	1	1		1				
LM23	Buffers	Adhere to buffer zones and safeguard zones	15	15		1		5		9
Nutrient Management Issues										
NMP1	Preparation and Implementation of NMP	Avoid application at high risk places (CSA's)				2		1		
NMP1	Preparation and Implementation of NMP	Informing and educating farmers	3	3						
NMP1	Preparation and Implementation of NMP	Precision application of nutrients at correct rate	3	3		3				
NMP2	Achieving appropriate Soil Fertility (Lime P&K)	Implementation of Nutrient Management Plan	1	1		1				
NMP2	Achieving appropriate Soil Fertility (Lime P&K)	Informing and educating farmers								
NMP4	Organic Manure Timing, Location & Method	Adopt latest manure application techniques	1	1						1
NMP4	Organic Manure Timing, Location & Method	Avoid Application at high risk places	1	1						1

NMP4	Organic Manure Timing, Location & Method	Avoid application at high risk times	5	5		2	3
NMP4	Organic Manure Timing, Location & Method	Informing and educating farmers	1	1			1
NMP5	Recorded Import/Export Organic Manures	Avoid application at high risk places (CSA's)					
NMP6	Timing - Early & Late N and Phosphorus	Avoid application at high risk times				1	
NMP6	Timing - Early & Late N and Phosphorus	Informing and educating farmers	1	1			
NMP7	Fertiliser Rates	Informing and educating farmers					
NMP12	Fertiliser Type	Informing and educating farmers	3	3	2	1	

