



Water Management Alliance
1st Annual Carbon Report
February 2023

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1. INTRODUCTION

This is the Water Management Alliance's first-ever full carbon audit, as it strives to reduce carbon emissions by 50% by 2030.

The carbon audit will allow the Water Management Alliance to calculate and benchmark its carbon emissions and enable the key sources of emissions to be identified. A Carbon reduction plan will follow focussing on where to reduce carbon emissions.

Phil Camamile – CEO of Water Management Alliance, said: "This is our first full carbon audit. Reducing carbon emission by 50% by 2030 is very challenging for us given the nature of our work, and the impact the weather has on our operations. Producing this carbon audit is our first step on the journey; this will provide us with the information to baseline our emissions and identify areas to focus on and monitor our progress to 2030".

2. PURPOSE

The Water Management Alliance would like to commit to the Government's ask of small businesses (SMEs) to commit to take climate action in three ways:

- 50% reduction in greenhouse gas emissions before 2030. (Scope 1 and Scope 2)
- Achieve net zero emissions by 2050. (across Scope 1, 2 and 3)
- Disclose progress on a yearly basis.

3. METHODOLOGY

3.1 The GHG Protocol

The GHG Protocol establishes comprehensive global standardized frameworks to account for and report on greenhouse gas emissions. This carbon audit has been produced in line with the principles of the Greenhouse Gas (GHG) Protocol and UK Government Department for Business, Energy and Industrial Strategy (BEIS) GHG reporting guidance.

The GHG emissions have been calculated by multiplying activity data by the relevant emissions factor:

$$\text{Activity data} \times \text{GHG emissions factor} = \text{GHG emissions}$$

GHG emissions are expressed as carbon dioxide equivalents (CO₂e), and include; Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Sulphur hexafluoride (SF₆), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Nitrogen trifluoride (NF₃).

3.2 Scope Definitions

The Green House Gas Protocol defines 3 types of emission categories referred to as Scopes. To help demonstrate Figure 1 is a Scope Infographic. Figure 2 describes each activity the WMA has included within each Scope.

Scope 1 - Direct Emissions from activities under our control. Primarily relating to fossil fuel combustion

Scope 2 - Indirect Emissions from the electricity we purchase and use

Scope 3 - All other indirect emissions from activities, sources we don't own or control

3.3 Organisational boundary

Calculating scope 3 emissions can often be difficult because the data required is mostly held by other organisations in the supply chain. For Scope 3 we have had to be clear which activities we are unable to report on

Included -

- Fuel purchased by WMA for owned plant used for PSCA Work

Excluded -

- Fuel purchased by contractors for their own vehicles and plant undertaking IDB work.

- Emissions from FCERM Capital projects where we use contractors.

- Employee Commuting

For the excluded items we may look to develop a reporting process that would allow us to report these emissions in future annual audits. We will request contractors for any construction projects to inform us of their emission reporting capabilities and which GHG calculation and reporting standards they operate to.

3.4 Coverage

The Water Management Alliance is an umbrella organisation, offering back-office and technical services to a consortium of seven Internal Drainage Boards. Each Internal drainage Boards managed by the WMA is an autonomous local, public body which has statutory duties to the environment as it undertakes its permissive powers.

To produce the first annual report, the Water Management Alliance has reviewed data of the seven member boards over the past 3 financial years - 2019 /20, 2020/21 and 2021/22.

The IDBs covered by the consortium are included – South Holland IDB, King's Lynn IDB, Norfolk Rivers IDB, Broads IDB, Waveney, Lower Yare & Lothingland IDB, East Suffolk IDB and Pevensey & Cuckmere WLMB. Data has been collected and summarised for individual Boards and collectively as the WMA.

3.5 Reporting and Measuring

The reporting period is from 01/04/2019 to 31/03/2022 in this baselining exercise. Reporting takes place annually, using the BEIS environment reporting guidelines. All information is calculated using up to date BEIS emissions conversion factors and is stored and processed using Microsoft Excel.

3.6 Target

The IDBs of the WMA have a carbon net zero target date of 2050.

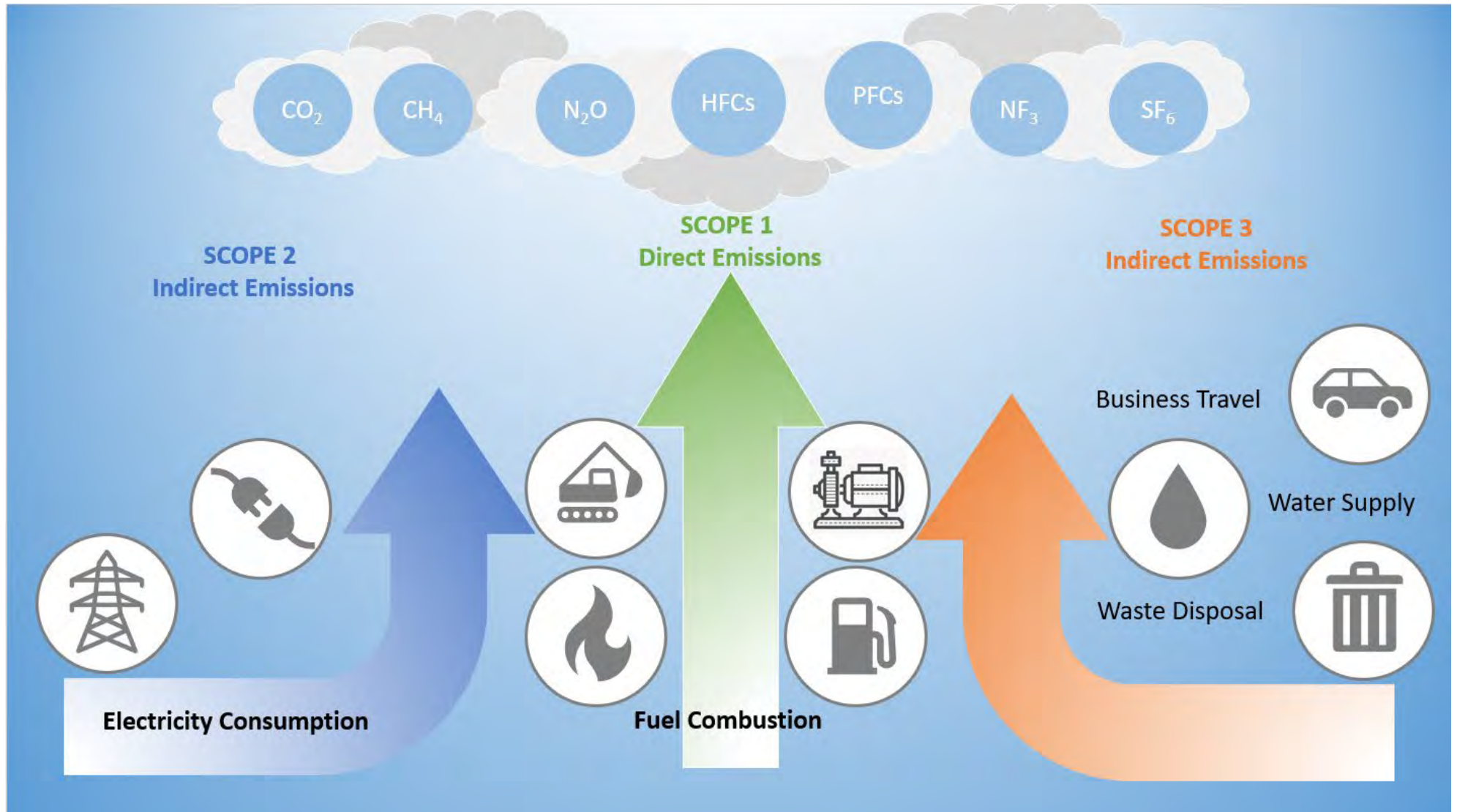


Figure 1: Scope Infographic

Activity	Description	Data Source	Unit	
Scope 1 - Direct Emissions – Fuel Consumption				
Fuel in Fleet Vehicles	White Diesel	operational vehicle Fleet & Plant	fuel invoices	Litres
	Petrol			
	Red Diesel			
	Bio Oil			
Offices	Fugitive Emissions	Air con flouros	EOC Services	Kg
Pumping Station	Red Diesel Generators	Operating Pumping station back-up generators	fuel invoices	Litres
	Unleaded			
Scope 2 - Indirect Emissions – Electricity Consumption				
Electricity Emissions	Offices	Electricity purchased from the national grid to power the WMAs offices and Pumping Stations	utility bills	kWh
	Pumping Station			
Scope 3 - Other Indirect Emissions				
	Electricity Transmission & Distribution Losses	These are indirect emissions from the transmission and distribution of our purchased electricity. It is considered best practise to include these	utility bills	kWh
	Business travel inc Car, rail, and flights	Staff travel - in their own vehicles on business grounds, via train or plane	employee mileage claims / expenses	Miles / km
	Water Supply & Treatment	The supply of water to our buildings and sites. Treatment is the water we return to the system (90% return to sewer rate).	utility bills	m ³
	Waste & Recycling	Weight of Waste and recycling collected from our offices	Veolia Dashboard	Kg

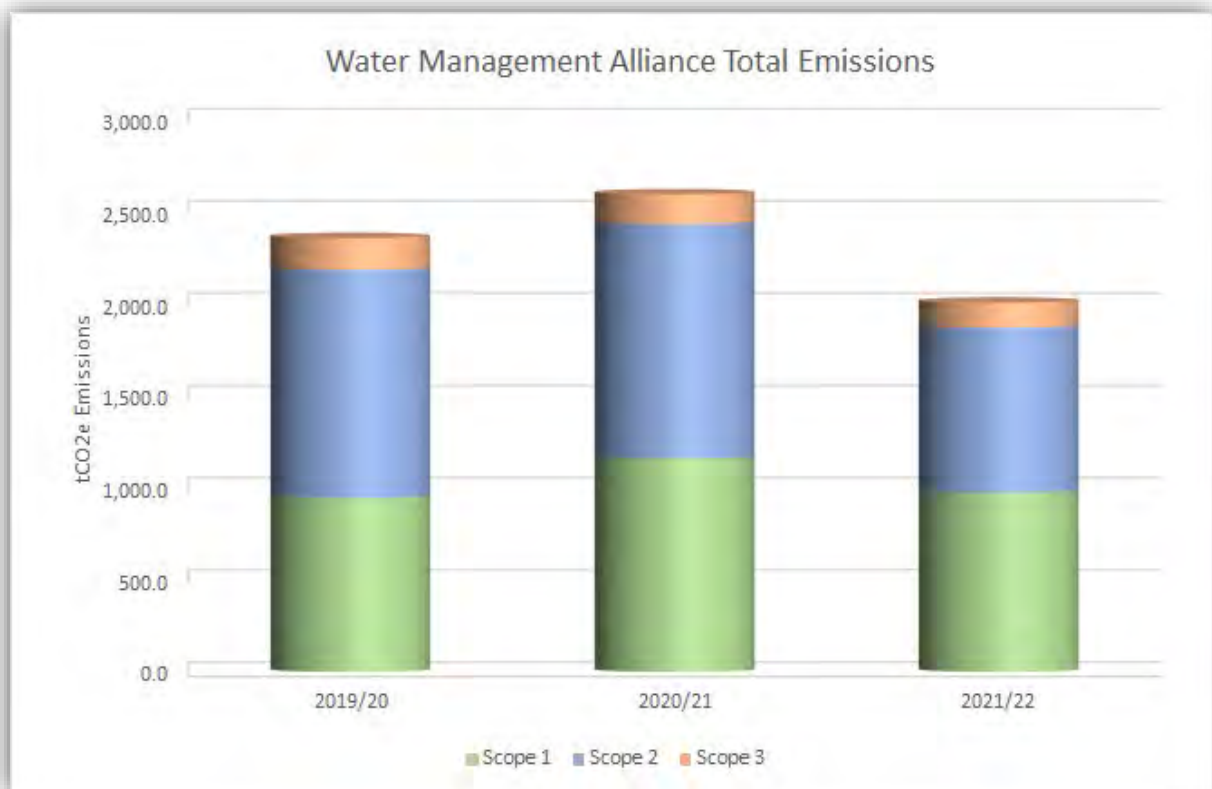
Figure 2: Description of each activity WMA included witin each Scope

4. RESULTS

4.1 WMA Summary

The data shows that overall Carbon Emissions in 2021/22 are 15% lower compared to our baseline year of 2019/20. This is a reduction of 350 tCO₂e.

All Board's emissions have reduced in 2021/22 against our baseline year of 2019/20, except Norfolk Rivers IDB and Broads IDBs which is further explained within their Appendices.



Scope 1

- **Overall Emissions 3.13% higher in 2021/22 than 2019/20**
- The overall emissions would have reduced if it was not for the inclusion of Fugitive Emissions (Air con) that were installed in the new Pierpoint office.
- Diesel for pump engines and generators was high in 2020/21 due to the bad weather requiring increased pumping in South Holland IDB, King's Lynn IDB and Broads IDB.

Scope 2

- **Overall Emissions 27.8% lower in 2021/22 than 2019/20.**
- Overall Usage (kWh) is 12.8% lower, but the savings to emissions is even larger than usage because the conversion factor also reduced significantly over this time, compounding the reduction.

- Electricity used for pumping stations was high in 2020/21 due to the bad weather requiring increased pumping especially in King’s Lynn IDB, Broads IDB and East Suffolk IDB

Scope 3

- **Overall Emissions are 21% lower in 2021/22 than 2019/20**
- Every activity measured saw a reduction in emissions except waste which increased in both South Holland IDB and King’s Lynn IDB. Recycling increased in King’s Lynn IDB, probably due to clearing our Kettlewell Office before the upcoming office move to our new office Pierpoint Office.

4.2 Baseline Year

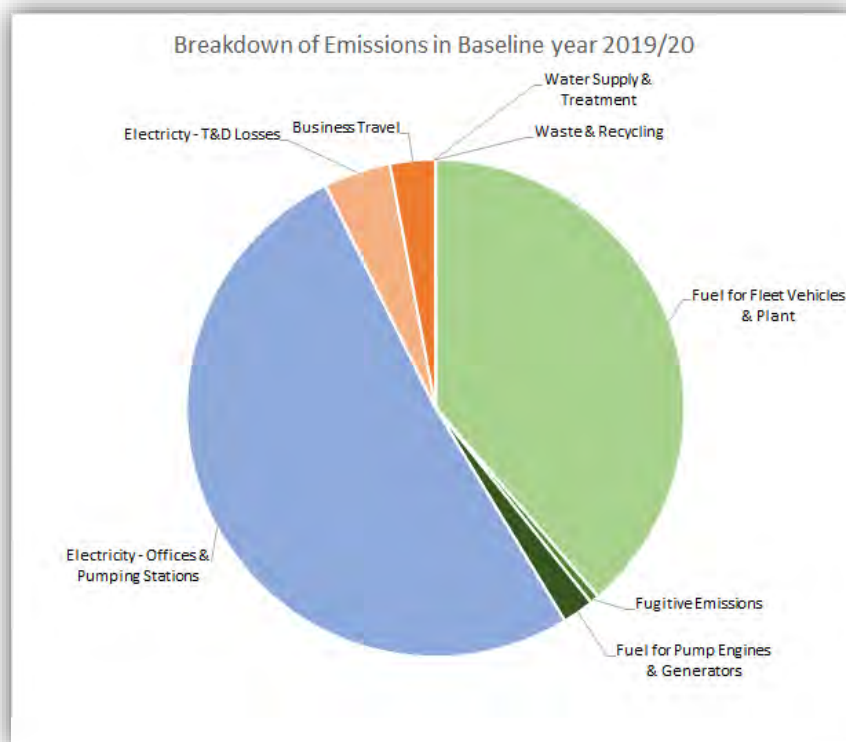
During the 3 year reporting period there has been varied weather, 2019/20 was the wettest February on record and 5th wettest Winter, in 2020/21 there was significant flooding and high water flows during December. The variations of rainfall in each of the years covered compared to the 30 year average is shown in Appendix 8.

The covid pandemic began in March 2020 and caused disruption to ways of working during 2020/21.

Using 2020/21 as a Baseline year, with its high rainfall causing elevated emissions through electricity and diesel use at our pumping stations feels unreasonable as it is an ‘abnormal’ year exaggerating our baseline if chosen.

2019/20 does feel reasonable as the most reflective of a ‘normal’ year.

Therefore the baseline we will measure emissions against going forwards will be 2019/20.



4.3 Assumptions & Limitations

The greatest source of inaccuracy throughout the data is Electricity Usage. This is summarised for each board below

IDB	Available Information	Limitations or Assumption
South Holland	Actual Usage from meter readings	N/A
King's Lynn	Actual Usage from meter readings	N/A
Norfolk Rivers	N/A	N/A
Broads	Estimated Bills & Actual usage depending on supplier information	Where estimated bills have been used the accuracy is undetermined
Waveney, Lower Yare & Lothingland	Estimated Bills for 2021/22 with the exception of the half hourly meter reads where we are dependent on the information from suppliers	Where estimated bills have been used the accuracy is undetermined. There are no figures pre 2021/22 available so we have had to assume same electricity usage for all 3 years as an average couldn't be applied from other boards as they varied too much.
East Suffolk	Estimated Bills & Actual usage depending on supplier information	Where estimated bills have been used the accuracy is undetermined
Pevensey & Cuckmere	Actual Usage from meter readings	N/A

Scope 1 – Air con carbon emissions are shown in the year the air con was installed

Scope 3 – Waste & recycling values for 2019/20 are unknown at both South Holland IDB and King's Lynn IDB, so assumed the same value as 2020/21. Waste & Recycling at Broads IDB (Martham Depot) is completely unknown so no values have been used.

4.4 Quality Control

The Finance team collating the data have applied data checks and consistency in producing data from the system. All outliers have been checked and explanations sought and documented from individual IDBs where large variations have occurred.

4.5 Next steps

The IDBs of the WMA plan to follow a phased approach to reducing emissions on the journey toward net zero. An action plan will be produced and agreed by member Boards in the first instance to examine the best approach; assess quick wins and medium and long-term commitments to reaching the target.

An annual carbon audit will be published each year to allow us to monitor and record our progress over time.

4.6 Data

		WMA TOTAL kgCO2e Emissions (excl Pevensey)		
		2019/20	2020/21	2021/22
Scope 1 - Direct Emissions				
Fuel in Fleet Vehicles	White Diesel	151,605.7	150,615.0	150,444.7
	Petrol	1,826.6	1,643.5	1,560.3
	Red Diesel	730,561.6	885,025.9	744,720.1
	Bio Oil	0.0	0.0	550.0
	Gas	0.0	13.7	13.7
Offices	Oil	0.0	0.0	0.0
	Air con flouros	13,303.5	0.0	75,153.1
Pumping Station	Red Diesel Pump Engines or Generators	46,282.8	120,042.5	617.9
	Unleaded	11.0	362.3	100.5
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	23,489.3	17,327.2	19,364.0
	Pumping Station	1,212,821.1	1,251,268.8	873,348.1
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	104,796.6	109,164.6	80,007.2
Business Travel	Private Car Business travel	65,653.4	52,275.5	55,324.2
	Rail	120.3	27.8	117.9
	Flying	584.5	0.0	0.0
Water Supply / Treatment	Water Supply	365.9	349.6	58.0
	Water treatment	26.5	30.8	22.2
Waste / recycling	Waste	76.6	76.5	117.3
	Recycling	9.5	9.5	11.6
TOTAL		2,351,535.0	2,588,233.1	2,001,530.8
Scope 1 Total		943,591.3	1,157,702.8	973,160.3
Scope 2 Total		1,236,310.4	1,268,596.0	892,712.0
Scope 3 Total		171,633.3	161,934.3	135,658.4
% Change from Baseline year 2019/20				-15

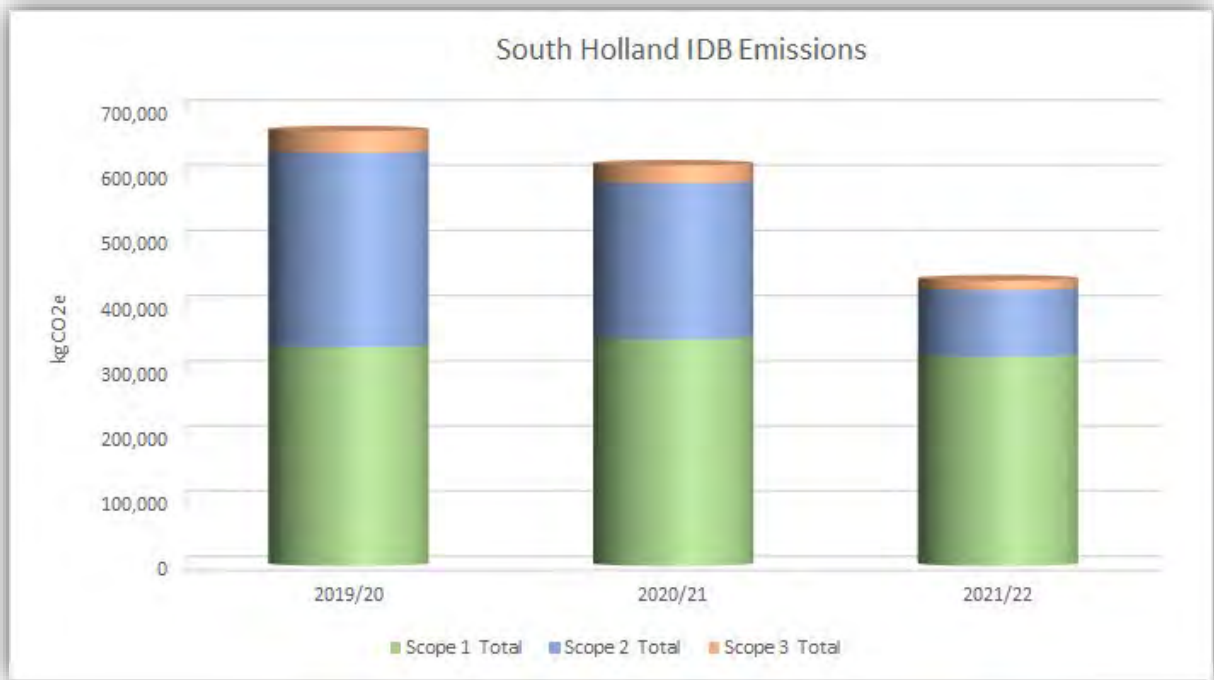
4.7 Improvements for future reports

- Actual Electricity usage to be improved by taking meter reads at least annually.
- Need to improve understanding of waste and recycling amounts at Martham depot for Broads IDB.
- Emissions for PSCA work and Capital projects to be differentiated so emissions are not skewed by work done for others. This should not be reflected as WMA carbon emissions.
- A method for recording contractors emissions where they are undertaking IDB work to be developed as this should be reflected as our carbon emissions.

APPENDIX 1: SOUTH HOLLAND IDB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 34% lower compared to our baseline year of 2019/20. This is a reduction of 229 tCO₂e.



1.2 Results

Scope 1

- Overall Emissions 4.5% lower in 2021/22 than 2019/20
- White and Red Diesel usage and emissions from Fleet vehicles have dropped since 2019/20
- Red Diesel in Generators was high in 2020/21 due to using the mobile generator while pumps were changed at Fleet Haven

Scope 2

- Overall Emissions 65% lower in 2021/22 than 2019/20
- This is a significant reduction in Electricity use at pumping stations due to the dry conditions

Scope 3

- Overall Emissions 55% lower in 2021/22 than 2019/20
- Emissions from Electricity T&D losses have dropped in line with reduction in Electricity use
- A reduction in business travel of 25%

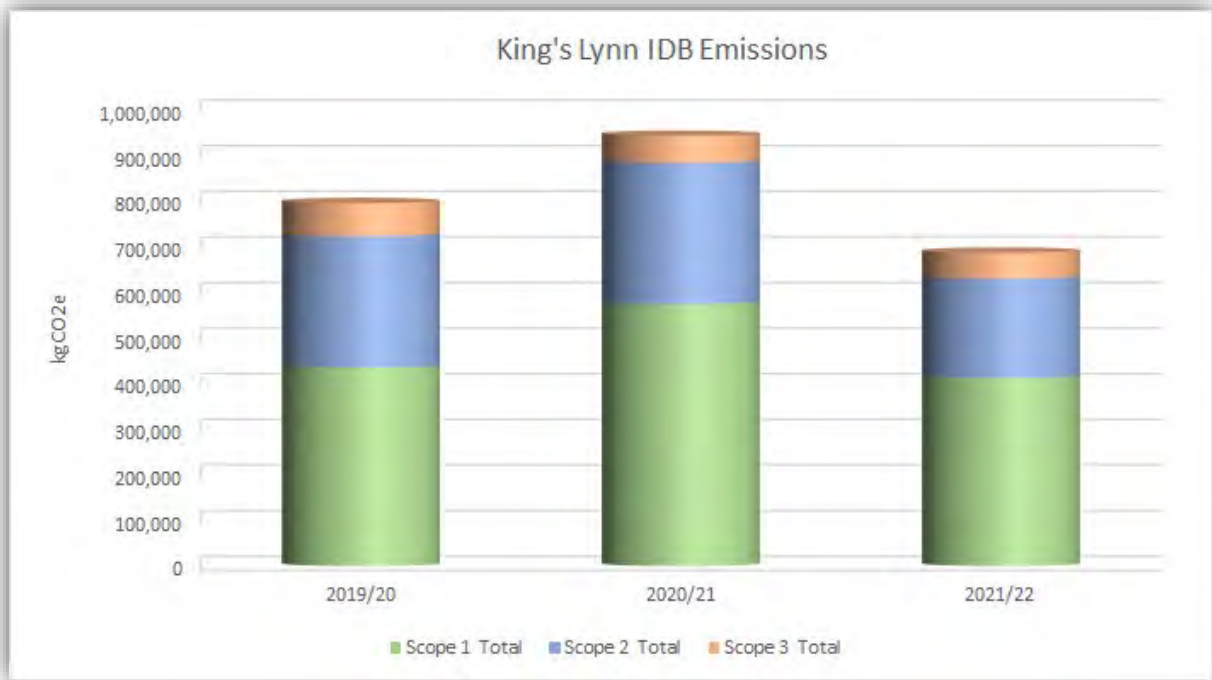
1.3 Data

		South Holland IDB kgCO2e Emissions		
Scope 1 - Direct Emissions		2019/20	2020/21	2021/22
Fuel in Fleet Vehicles	White Diesel	37,719.4	35,165.4	28,498.6
	Petrol	521.3	362.1	390.5
	Red Diesel	293,029.5	308,623.7	291,263.6
	Bio Oil	0.0	0.0	0.0
	Gas	0.0	0.0	0.0
Offices	Oil	0.0	0.0	0.0
	Air con flouros	4,434.5	0.0	0.0
Pumping Station	Red Diesel Pump Engines or Generators	69.0	3,623.7	617.9
	Unleaded	0.0	0.0	0.0
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	3,571.7	3,607.1	3,525.3
	Pumping Station	294,255.9	235,950.7	98,723.7
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	25,245.5	20,614.3	9,163.8
Business Travel	Private Car Business travel	7,833.9	6,395.6	5,654.1
	Rail	0.0	0.0	0.0
	Flying	0.0	0.0	0.0
Water Supply / Treatment	Water Supply	72.2	67.8	15.3
	Water treatment	0.0	0.0	0.0
Waste / recycling	Waste	72.6	72.5	106.5
	Recycling	0.0	0.0	0.0
TOTAL		666,825.5	614,482.7	437,959.5
Scope 1 Total		335,773.6	347,774.8	320,770.7
Scope 2 Total		297,827.6	239,557.8	102,249.1
Scope 3 Total		33,224.3	27,150.1	14,939.7
% Change from Baseline year 2019/20				-34

APPENDIX 2: KINGS LYNN IDB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 14% lower compared to our baseline year of 2019/20. This is a reduction of 109 tCO₂e.



1.2 Results

Scope 1

- Overall Emissions 5% lower in 2021/22 than 2019/20
- White and Red Diesel emissions from Fleet vehicles have reduced
- Red Diesel was used in 3 Pump Engines at the old Islington pumping station in 2019/20 and 2020/21. The emissions from red diesel increased significantly in 2020/21 with the old Islington PS being run during the wet winter, the new pumping station taking delivery of 10,000 litres of red diesel for the new generator on site and diesel for the generator at Pierpoint
- There were no emissions recorded for red diesel used in Pump Engines and generators in 2021/22 as the old Islington station had been decommissioned and generators have not run at Pierpoint or the new Islington Pumping station in that year

Scope 2

- Overall Emissions 24% lower in 2021/22 than 2019/20
- Electricity emissions from Pumping Stations increased in 20/21 due to increase in pumping requirements in the winter floods

Scope 3

- Overall Emissions 23% lower in 2021/22 than 2019/20
- Emissions from Electricity T&D losses have dropped in line with reduction in Electricity use
- A reduction of 34% to WMA staff business travel

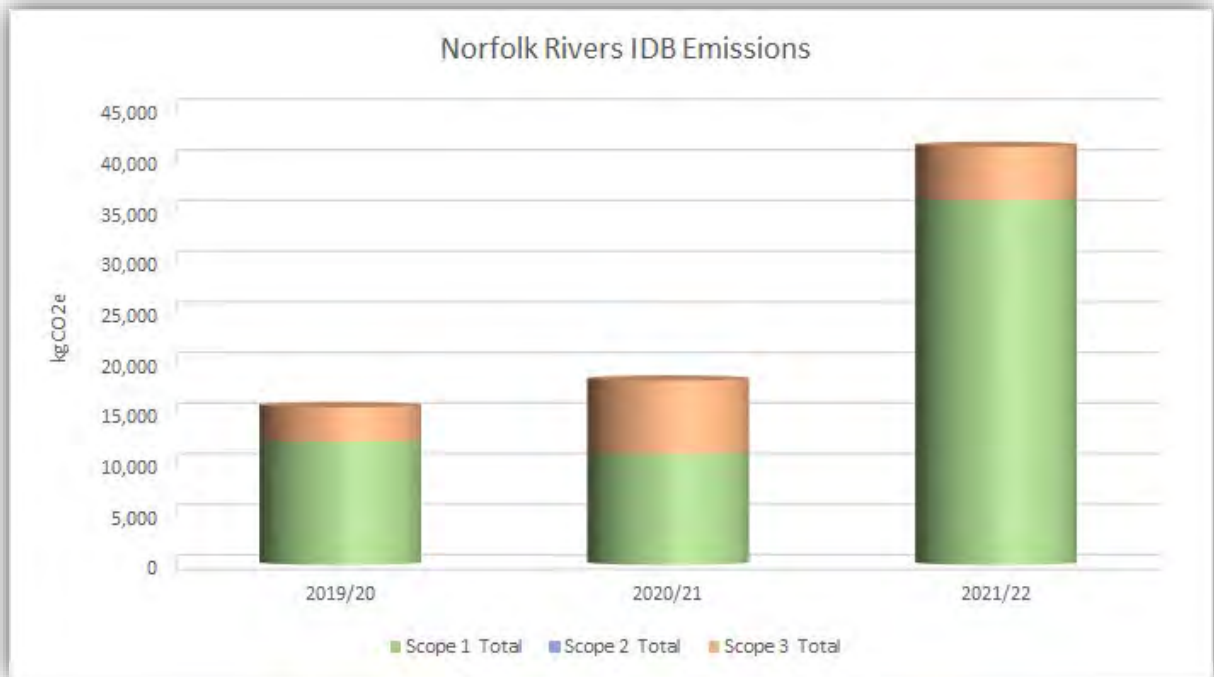
1.3 Data

		King's Lynn IDB kgCO2e Emissions		
Scope 1 - Direct Emissions		2019/20	2020/21	2021/22
Fuel in Fleet Vehicles	White Diesel	30,152.8	28,556.1	27,229.1
	Petrol	479.6	419.4	515.9
	Red Diesel	349,070.8	433,246.9	308,664.7
	Bio Oil	0.0	0.0	0.0
	Gas	0.0	0.0	0.0
Offices	Oil	0.0	0.0	0.0
	Air con flouros	8,869.0	0.0	75,153.1
Pumping Station	Red Diesel Pump Engines or Generators	46,213.8	111,774.8	0.0
	Unleaded	0.0	0.0	0.0
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	14,919.2	7,810.7	9,938.8
	Pumping Station	272,442.9	301,665.8	208,396.0
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	24,358.4	26,630.9	19,567.7
Business Travel	Private Car Business travel	47,541.2	31,923.8	36,600.8
	Rail	120.3	27.8	117.9
	Flying	584.5	0.0	0.0
Water Supply / Treatment	Water Supply	293.7	281.8	42.7
	Water treatment	26.5	30.8	22.2
Waste / recycling	Waste	4.0	4.0	10.8
	Recycling	9.5	9.5	11.6
TOTAL		795,086.0	942,382.3	686,271.2
Scope 1 Total		434,785.9	573,997.1	411,562.7
Scope 2 Total		287,362.0	309,476.5	218,334.8
Scope 3 Total		72,938.0	58,908.6	56,373.7
% Change from Baseline year 2019/20				-14

APPENDIX 3: NORFOLK RIVERS IDB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 165% higher compared to our baseline year of 2019/20. This is an increase of 26 tCO₂e.



1.2 Results

Scope 1

- Overall Emissions 295% higher in 2021/22 than 2019/20
- Red Diesel appears to increase significantly due to Norfolk Rivers purchasing their own excavator for 2021/22. This is somewhat misleading as emissions attributable to work in Norfolk Rivers in 2019/20 and 2020/21 are reflected within Broads data as the plant used was Broad's plant. Therefore emissions probably haven't increased significantly but are now reported directly against Norfolk Rivers from 2021/22 onwards

Scope 2

- No Emissions as there are no Pumping Stations or office

Scope 3

- Overall Emissions 158% higher in 2021/22 than 2019/20
- Private business travel increased in 2020/21 due to recruitment meaning there were 3 operatives but then fell in 2021/22 as 2 operatives left employment. It still remains higher than against 2019/20 levels

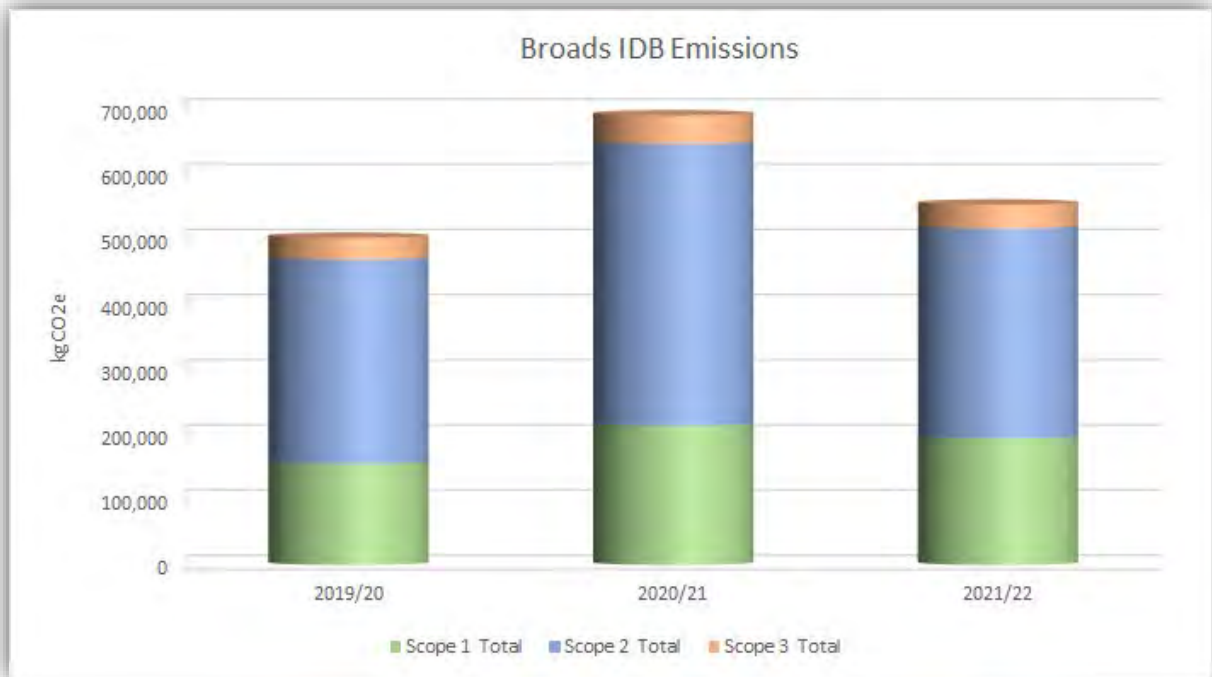
1.3 Data

		Norfolk Rivers IDB kgCO2e Emissions		
		2019/20	2020/21	2021/22
Scope 1 - Direct Emissions				
Fuel in Fleet Vehicles	White Diesel	0.0	0.0	0.0
	Petrol	0.0	0.0	108.8
	Red Diesel	12,194.0	10,959.3	35,273.8
	Bio Oil	0.0	0.0	550.0
	Gas	0.0	0.0	0.0
Offices	Oil	0.0	0.0	0.0
	Air con flouros	0.0	0.0	0.0
Pumping Station	Red Diesel Pump Engines or Generators	0.0	0.0	0.0
	Unleaded	0.0	0.0	0.0
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	0.0	0.0	0.0
	Pumping Station	0.0	0.0	0.0
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	0.0	0.0	0.0
Business Travel	Private Car Business travel	3,345.4	7,195.3	5,280.1
	Rail	0.0	0.0	0.0
	Flying	0.0	0.0	0.0
Water Supply / Treatment	Water Supply	0.0	0.0	0.0
	Water treatment	0.0	0.0	0.0
Waste / recycling	Waste	0.0	0.0	0.0
	Recycling	0.0	0.0	0.0
TOTAL		15,539.4	18,154.7	41,212.8
Scope 1 Total		12,194.0	10,959.3	35,932.7
Scope 2 Total		0.0	0.0	0.0
Scope 3 Total		3,345.4	7,195.3	5,280.1
% Change from Baseline year 2019/20				165

APPENDIX 4: BROADS IDB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 10% higher compared to our baseline year of 2019/20. This is an increase of 51 tCO₂e.



1.2 Results

Scope 1

- Overall Emissions 25% higher in 2021/22 than 2019/20
- There is no petrol for fleet vehicles in 2021/22 as there were no courtesy vehicles
- Red and white diesel has increased. White diesel has increased due to the addition of 2 new MEICA team members. Red diesel increased due to Emergency works at Burnham Market that Broads board carried out on behalf of Norfolk Rivers
- Red Diesel in Generators was high in 20/21 due to requiring the generator at Breydon Pumping Station

Scope 2

- Overall Emissions 2.8% higher in 2021/22 than 2019/20
- Electricity emissions from Pumping Stations increased in 20/21 due to increase in pumping requirements in the winter floods

Scope 3

- Overall Emissions 9.5% higher in 2021/22 than 2019/20
- Emissions from Electricity T&D losses have increased in line with Electricity use

- Private business travel has increased by 16%
- There are no records for waste or recycling

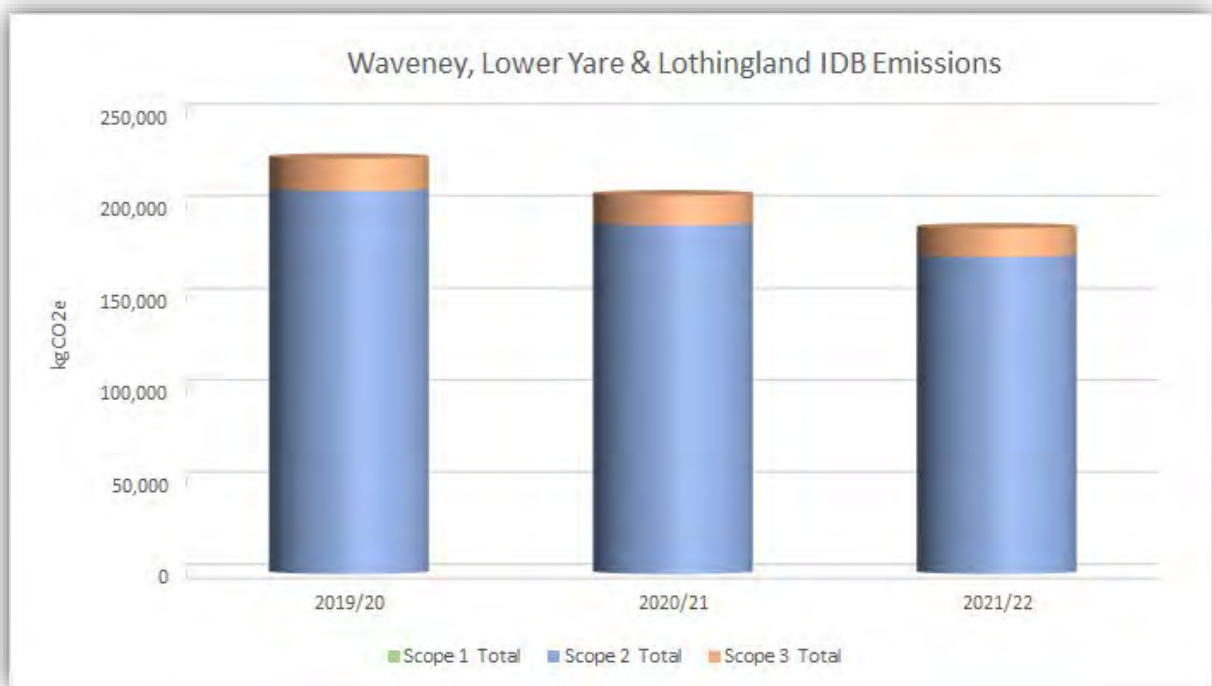
1.3 Data

		Broads IDB		
		kgCO2e Emissions		
Scope 1 - Direct Emissions		2019/20	2020/21	2021/22
Fuel in Fleet Vehicles	White Diesel	78,842.3	78,093.9	86,688.6
	Petrol	322.1	513.3	95.7
	Red Diesel	76,134.9	129,937.4	107,308.4
	Bio Oil	0.0	0.0	0.0
	Gas	0.0	13.7	13.7
Offices	Oil	0.0	0.0	0.0
	Air con flouros	0.0	0.0	0.0
Pumping Station	Red Diesel Pump Engines or Generators	0.0	4,644.1	0.0
	Unleaded	11.0	351.4	100.5
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	4,998.4	5,909.3	5,899.8
	Pumping Station	307,936.8	426,210.1	315,918.2
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	26,526.1	37,184.5	28,842.2
Business Travel	Private Car Business travel	6,932.9	6,760.8	7,789.2
	Rail	0.0	0.0	0.0
	Flying	0.0	0.0	0.0
Water Supply / Treatment	Water Supply	0.0	0.0	0.0
	Water treatment	0.0	0.0	0.0
Waste / recycling	Waste	0.0	0.0	0.0
	Recycling	0.0	0.0	0.0
TOTAL		501,704.6	689,618.6	552,656.2
Scope 1 Total		155,310.4	213,553.8	194,206.9
Scope 2 Total		312,935.2	432,119.5	321,818.0
Scope 3 Total		33,459.1	43,945.3	36,631.4
% Change from Baseline year 2019/20				10

APPENDIX 5: WAVENEY, LOWER YARE & LOTHINGLAND IDB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 17% lower compared to our baseline year of 2019/20. This is a reduction of 38 tCO₂e.



1.2 Results

The only Emissions for Waveney, Lower Yare & Lothingland are from Electricity use and Electricity T&D Losses

Scope 1

- No Emissions as no generators , offices or fleet vehicles

Scope 2

- Overall Emissions 17% lower in 2021/22 than 2019/20
- Because we have no electricity usage pre 2021/22, we have assumed the same electricity usage for all 3 years (as explained in point 4.3 of main report). Although the usage is the same the emissions have reduced due to the conversion factor from the *UK Governments GHG Conversion Factors document* reducing

Scope 3

- Overall Emissions 12% lower in 2021/22 than 2019/20
- Emissions from Electricity T&D losses have reduced due to the conversion factor from the *UK Governments GHG Conversion Factors document* reducing
- No other emissions as no offices

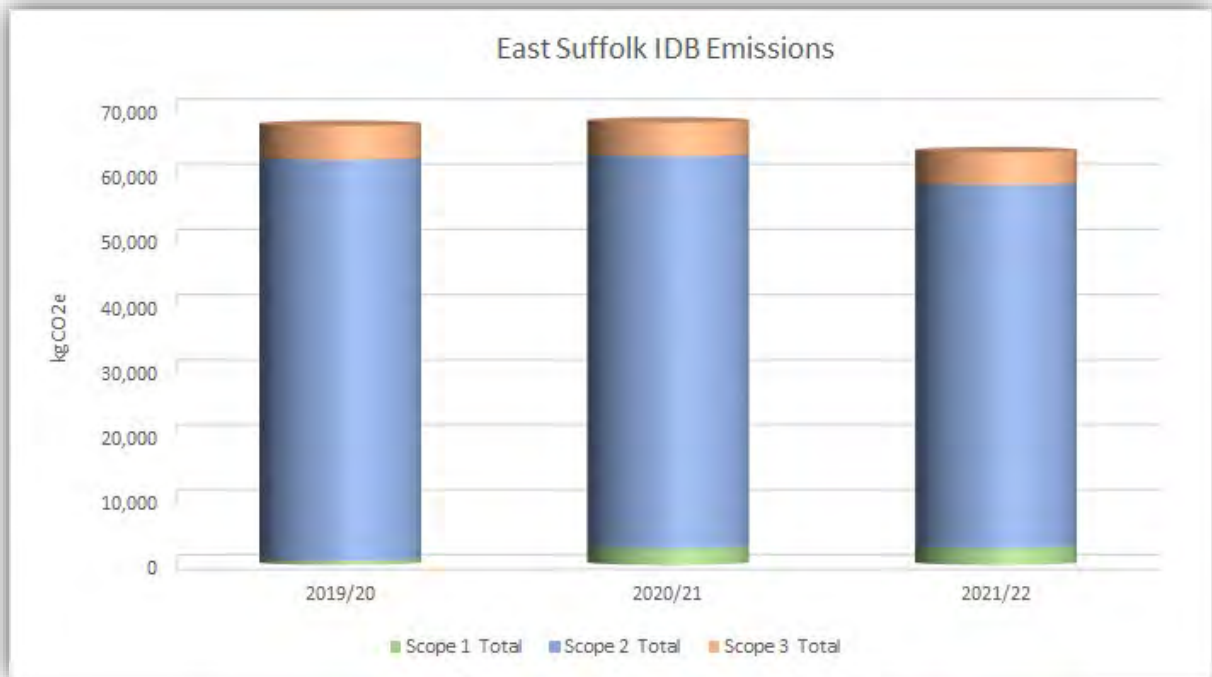
1.3 Data

		Waveney, Lower Yare & Lothingland IDB		
		kgCO2e Emissions		
Scope 1 - Direct Emissions		2019/20	2020/21	2021/22
Fuel in Fleet Vehicles	White Diesel	0.0	0.0	0.0
	Petrol	0.0	0.0	0.0
	Red Diesel	0.0	0.0	0.0
	Bio Oil	0.0	0.0	0.0
	Gas	0.0	0.0	0.0
Offices	Oil	0.0	0.0	0.0
	Air con flouros	0.0	0.0	0.0
Pumping Station	Red Diesel Pump Engines or Generators	0.0	0.0	0.0
	Unleaded	0.0	0.0	0.0
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	0.0	0.0	0.0
	Pumping Station	207,825.7	189,153.8	172,105.6
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	17,616.5	16,277.0	15,424.6
Business Travel	Private Car Business travel	0.0	0.0	0.0
	Rail	0.0	0.0	0.0
	Flying	0.0	0.0	0.0
Water Supply / Treatment	Water Supply	0.0	0.0	0.0
	Water treatment	0.0	0.0	0.0
Waste / recycling	Waste	0.0	0.0	0.0
	Recycling	0.0	0.0	0.0
TOTAL		225,442.1	205,430.8	187,530.2
Scope 1 Total		0.0	0.0	0.0
Scope 2 Total		207,825.7	189,153.8	172,105.6
Scope 3 Total		17,616.5	16,277.0	15,424.6
% Change from Baseline year 2019/20				-17

APPENDIX 6: EAST SUFFOLK IDB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 6% lower compared to our baseline year of 2019/20. This is a reduction of 4 tCO₂e.



1.2 Results

Scope 1

- Overall Emissions 400% higher in 2021/22 than 2019/20, increasing from 276 litres of fuel in 2019/20 to 957 litres of fuel in 2021/22. We think this is because Broads didn't recharge works correctly in 2019/20

Scope 2

- Overall Emissions 9.4% lower in 2021/22 than 2019/20
- Electricity usage has increased slightly year on year, coming to a total increase in 2021/22 from 2019/20 of 9.4%. However emissions have reduced by 9.4% due to the conversion factor from the *UK Governments GHG Conversion Factors document* reducing

Scope 3

- Overall Emissions 4.2% lower in 2021/22 than 2019/20
- Emissions from Electricity T&D losses have reduced due to the conversion factor from the *UK Governments GHG Conversion Factors document* reducing
- No other emissions as no offices

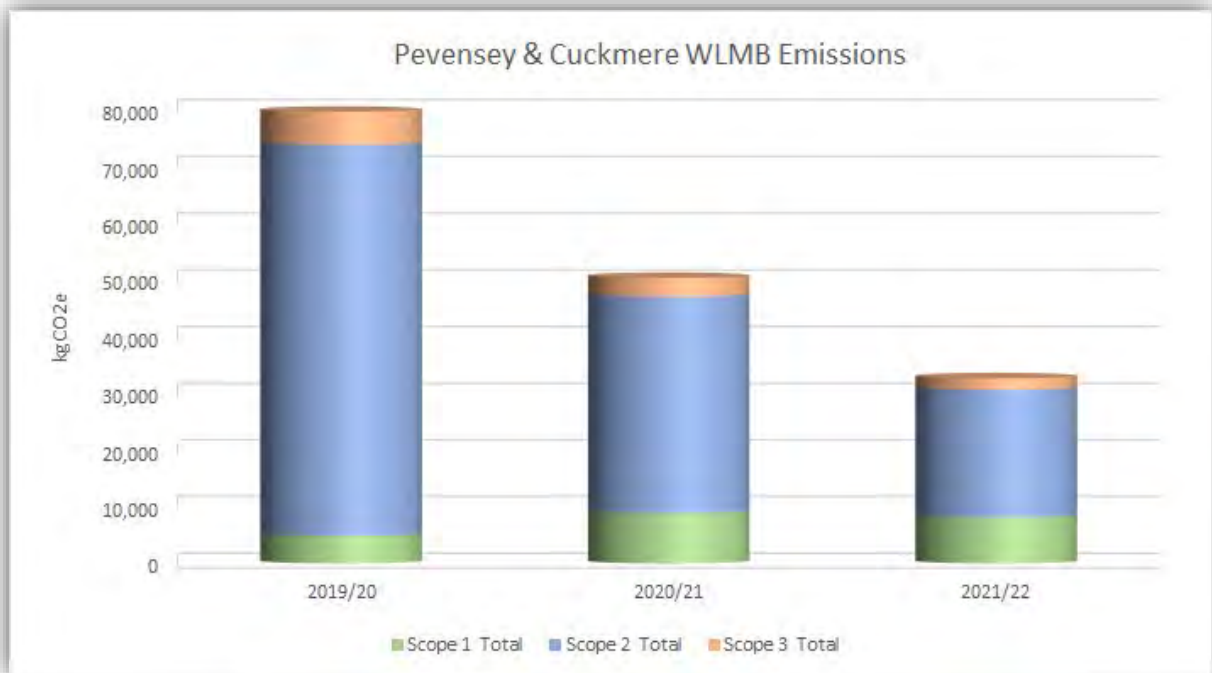
1.3 Data

		East Suffolk IDB kgCO2e Emissions		
Scope 1 - Direct Emissions		2019/20	2020/21	2021/22
Fuel in Fleet Vehicles	White Diesel	0.0	0.0	0.0
	Petrol	503.6	270.2	342.9
	Red Diesel	132.4	2,258.6	2,209.6
	Bio Oil	0.0	0.0	0.0
	Gas	0.0	0.0	0.0
Offices	Oil	0.0	0.0	0.0
	Air con flouros	0.0	0.0	0.0
Pumping Station	Red Diesel Pump Engines or Generators	0.0	0.0	0.0
	Unleaded	0.0	10.8	0.0
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	0.0	0.0	0.0
	Pumping Station	61,511.9	60,152.7	55,745.2
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	5,214.1	5,176.2	4,996.0
Business Travel	Private Car Business travel	0.0	0.0	0.0
	Rail	0.0	0.0	0.0
	Flying	0.0	0.0	0.0
Water Supply / Treatment	Water Supply	0.0	0.0	0.0
	Water treatment	0.0	0.0	0.0
Waste / recycling	Waste	0.0	0.0	0.0
	Recycling	0.0	0.0	0.0
TOTAL		67,362.0	67,868.5	63,293.8
Scope 1 Total		636.0	2,539.6	2,552.5
Scope 2 Total		61,511.9	60,152.7	55,745.2
Scope 3 Total		5,214.1	5,176.2	4,996.0
% Change from Baseline year 2019/20				-6

APPENDIX 7: PEVENSEY & CUCKMERE WLMB

1.1 Summary

The data shows that overall Carbon Emissions in 2021/22 are 59% lower compared to our baseline year of 2019/20. This is a reduction of 47 tCO₂e.



1.2 Results

Scope 1

- Overall Emissions 66% higher in 2021/22 than 2019/20
- White Diesel has increased due to procuring the utility terrain vehicles, the polaris ranger to enable the Operations Manager to cover ground in the winter with the fields being too wet for the normal trucks.

Scope 2

- Overall Emissions 67% lower in 2021/22 than 2019/20
- This is a significant reduction in Electricity use at pumping stations due to the last few winters being drier than previous so the pumps have been run less, but the board has also made the following changes;
- Manxey – We have begun running this manually until our we replacement the pump
- Rickney – MEICA consultant amended the regime - the pump stays on for longer instead of stopping and starting regularly
- Horsebridge – The EAs Starr Inn gates have received a temporary fix to resolve hydraulic issues which has reduced the pumping from Horsebridge.

- All pumps (excl Rickney) – in summer months pumps are run manually to ensure water is not lost from the system during dry periods. Rickney stays on auto as it continuously gets fed with water from the sewage treatment plant.

Scope 3

- Overall Emissions 65% lower in 2021/22 than 2019/20
- Emissions from Electricity T&D losses have reduced due to the conversion factor from the *UK Governments GHG Conversion Factors document* reducing
- No other emissions as no offices

1.3 Data

		Pevensey WLMB kgCO2e Emissions		
		2019/20	2020/21	2021/22
Scope 1 - Direct Emissions				
Fuel in Fleet Vehicles	White Diesel	4,891.3	8,799.7	8,028.5
	Petrol	0.0	78.6	106.4
	Red Diesel	0.0	0.0	0.0
	Bio Oil	0	0.0	0.0
	Gas	0.0	0.0	0.0
Offices	Oil	0.0	0.0	0.0
	Air con flouros	0.0	0.0	0.0
Pumping Station	Red Diesel Pump Engines or Generators	0.0	0.0	0.0
	Unleaded	0.0	0.0	0.0
Scope 2 - Indirect Emissions				
Electricity Emissions	Offices	0.0	0.0	0.0
	Pumping Station	68,848.0	38,135.7	22,459.4
Scope 3 - Other Indirect Emissions				
Electricity T&D Losses	Electricity T&D Losses	5,835.9	3,281.6	2,012.9
Business Travel	Private Car Business travel	0.0	0.0	0.0
	Rail	0.0	0.0	0.0
	Flying	0.0	0.0	0.0
Water Supply / Treatment	Water Supply	0.0	0.0	0.0
	Water treatment	0.0	0.0	0.0
Waste / recycling	Waste	0.0	0.0	0.0
	Recycling	0.0	0.0	0.0
TOTAL		79,575.3	50,295.6	32,607.1
Scope 1 Total		4,891.3	8,878.3	8,134.8
Scope 2 Total		68,848.0	38,135.7	22,459.4
Scope 3 Total		5,835.9	3,281.6	2,012.9
% Change from Baseline year 2019/20				-59

APPENDIX 8: Maps showing actual rainfall as a % of the 1991 – 2020 Average (30 year averaging period) . Reference: Met Office, Exeter, UK

