

HORSHAM DISTRICT COUNCIL

Carbon Reduction Target Setting and Action Plan Support

August 2020

Executive Summary



Horsham
District
Council



EXECUTIVE SUMMARY

CHAPTER OVERVIEWS

1 CONTEXT

Aim: Set the current context around climate change action in Horsham and the Green Recovery.

Key messages: There is a growing consensus, locally and nationally on the need for urgent action to avoid the dangerous impacts of climate change. The challenges being faced by Local Authorities as a result of COVID-19 may also present opportunities for a Green Recovery.

2 FOOTPRINT REVIEW

Aim: Identify key emission sources to target action and assess what emissions to include in the target.

Key messages: Completeness improvement opportunities have been identified. An issue in the procurement data was raised by officers which will be recalculated by the Council. An estimate of emissions from staff commuting has been added to allow calculation of savings from working from home.

Classification improvement opportunities have also been identified. The footprint was re-categorised in collaboration with officers to align more closely with areas of action e.g. emissions split by vehicle type.

This chapter also explored what emissions to include in the target and considerations for setting a Scope 3 target, including the level of influence the Council has over emission sources.

3 SETTING A TARGET

Aim: Assess the implications of different target setting methods and make an informed and evidence-based decision on the most suitable target.

Key messages: Three types of target setting approaches (overleaf) have been assessed and the implications of each evaluated in terms carbon impact, associated criteria and scope.

It is recommended that the Council show the highest level of ambition and strong leadership by setting a Carbon Neutral by 2030 target for its Scope 1 and 2 emissions. A separate Scope 3 target of Carbon Neutral by 2050 is recommended as these emissions are significant but more challenging to reduce.

4 ACTION PLANNING

Aim: Identify key actions necessary to reach the agreed target and use the cost benefit analysis to inform implementation.

Key messages: Carbon reduction opportunities have been grouped across four key sectors (transport & fleet, property, procurement, parks & countryside) and options for the 'gap-to-target' considered.

Costs need careful comparison, where many investments offer lifetime paybacks or are investments that may need to happen anyway at some point in time, where the consideration may be more around timing.

EXECUTIVE SUMMARY

EMISSIONS TARGET EVALUATION

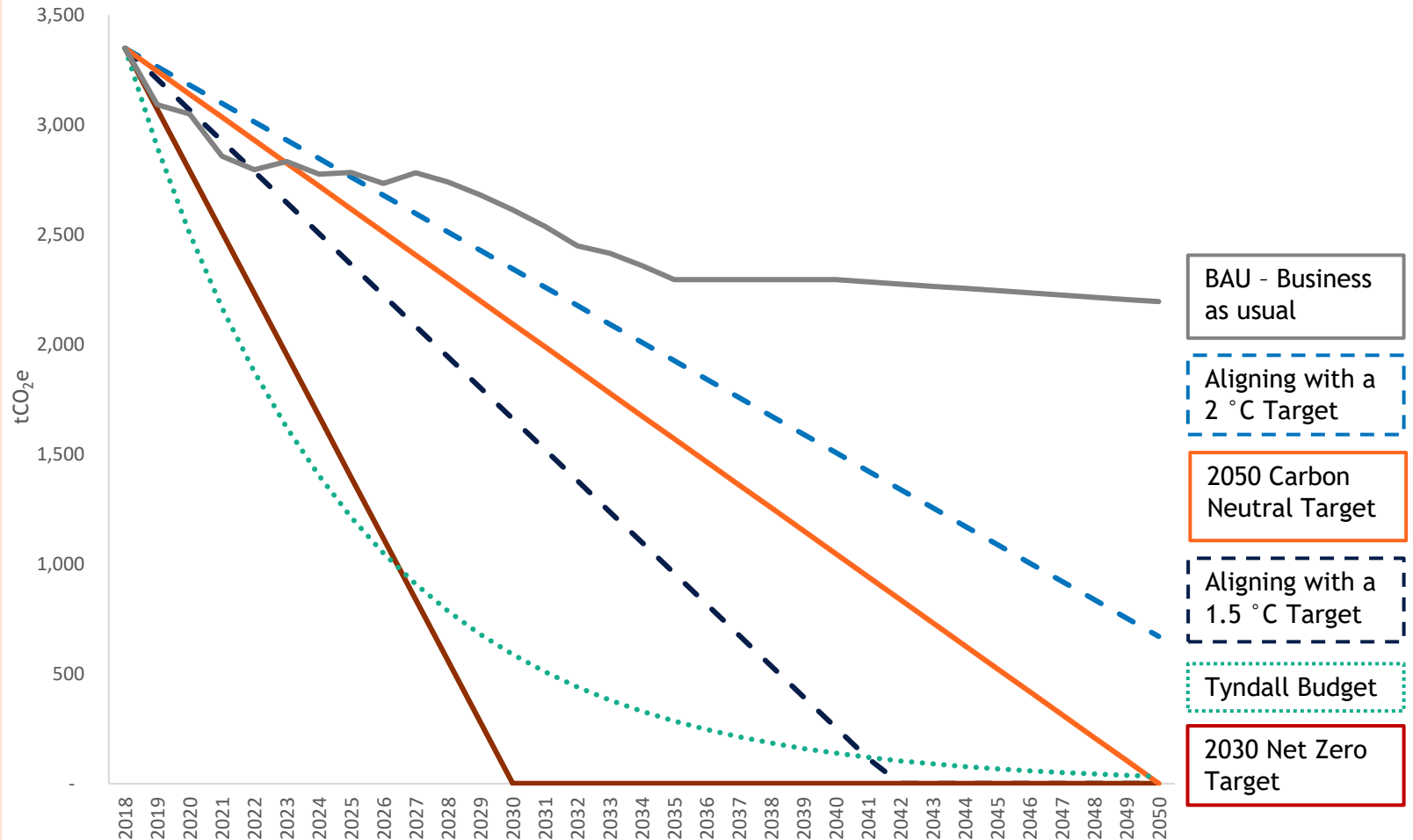
The UK is legally bound to reach Net Zero Emissions by 2050, and many local authorities are recognising the benefits of setting even more ambitious climate targets. Horsham District Council have publicly acknowledged their ambition to work towards a net zero carbon target, but not yet committed to action.

Method

We applied the 3 different target options available to assess the most appropriate course of action. These target types were:

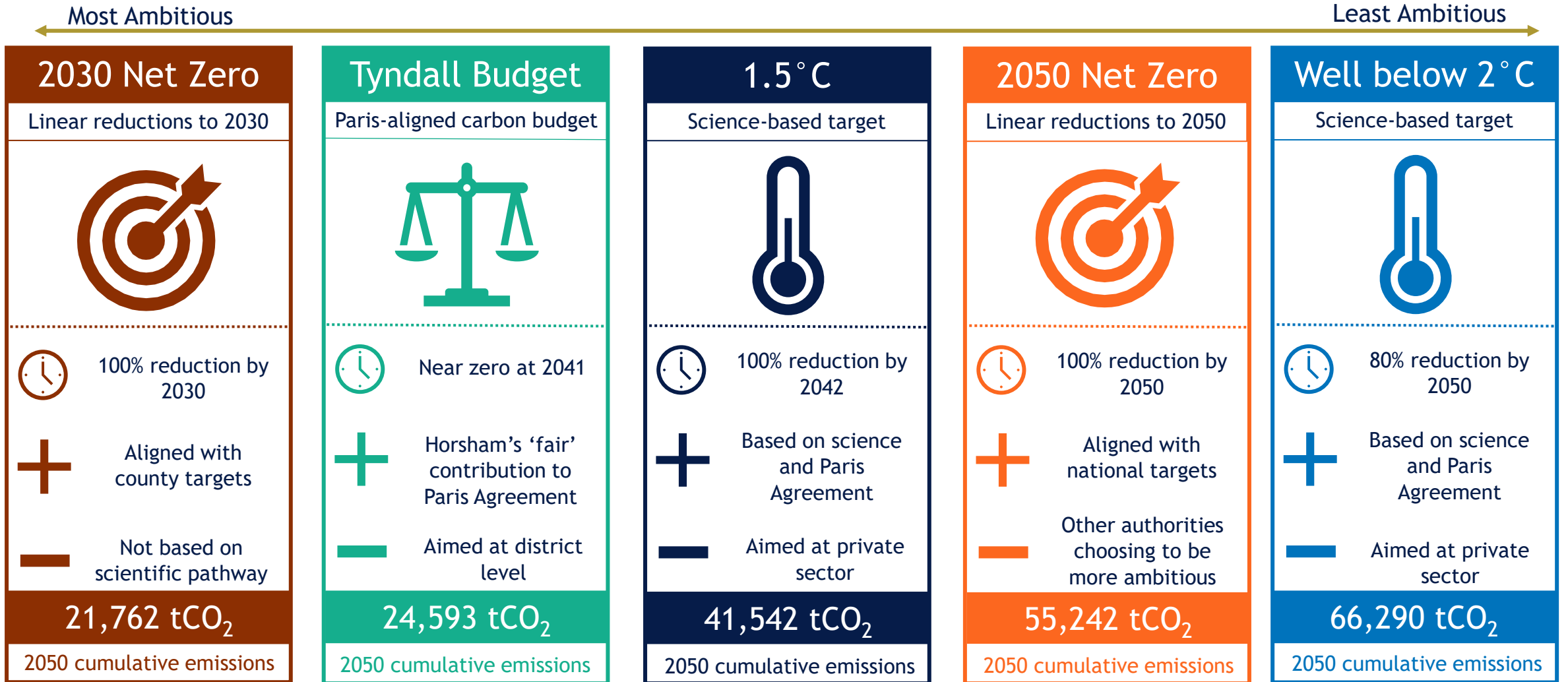
- 1** **'Absolute' Net Zero: 2030, 2040 and 2050:** A target based on a goal of carbon neutrality by a set date. Popular with local authorities.
- 2** **Science Based Target Initiative (SBTi) - 1.5 °C and 2 °C:** Reduction pathways in line with the Paris Climate Agreement. Primarily aimed at businesses.
- 3** **Tyndall Budget:** Target method aimed at whole local authority areas, but scaled down to HDC as an organisation. Based on Horsham's fair contribution to Paris Agreement.

Analysis also includes a Business as Usual (BAU) scenario which reflects decarbonisation of the national grid only. We undertook a quantitative analysis of each option's "carbon budget", and give commentary around their criteria and scope.



EXECUTIVE SUMMARY

EMISSIONS TARGET EVALUATION



EXECUTIVE SUMMARY

EMISSIONS TARGET EVALUATION

Key considerations

Thinking in terms of budgets - It is useful when comparing targets to think in terms of carbon budgets or cumulative emissions. This is more important than the date of carbon neutrality because once emitted, carbon dioxide remains in the atmosphere for many decades, contributing to increasing the average global temperature. The carbon budget does not reset; it represents a fixed upper limit to emissions.

Considering the wider district - The report is focused on HDC's own organisational emissions as a starting point for encouraging further action in the district. The Council's carbon footprint accounts for approximately 2% of the District's carbon footprint. Therefore, the relationship to a district-wide target should be considered.

Recommendation

Anthesis recommends setting two targets, addressing your Scope 1&2 and your Scope 3 emissions separately.

- **Scope 1&2: Apply the Carbon Neutral by 2030 target**

Opting for the most ambitious target signals a desire to lead. This approach also has the benefit of allowing for some contingency against the science if this is not met and brings HDC in line with West Sussex County Council's ambitions. Setting a highly ambitious target accelerates and maximises many financial and reputational benefits, and positions HDC well for any future increases to the level of ambition required driven either by HDC, or global factors.

- **Scope 3: Set a Carbon Neutral by 2050 target**

Scope 3 emissions make up a significant proportion of the council's footprint however they are more difficult to reduce as they are not within the council's direct control. Therefore, it is recommended that HDC set a separate Scope 3 target and at a minimum this should be in line with the national target of carbon neutral by 2050. Setting a Scope 3 target offers many benefits both in your value chain and in the wider district.

- **Focus on Procurement and Leased Buildings** - It is recommended that there is a focus on reducing emissions associated with Procurement and Leased Buildings as these are within stronger influence and make up a significant proportion of the Scope 3 footprint. This is in line with SBTi guidelines to focus on a significant part of your Scope 3 emissions that you are best positioned to influence.

Key Next Steps

The council should look to formally approve the target, before engaging the public through an awareness campaign.

Our Climate Action Plan highlights carbon reduction opportunities available in achieving the target, and will help in prioritising actions.

HDC may wish to explore improved data management protocols particularly around your Scope 3 emissions, to improve confidence in reporting and monitoring against the target. However, we do not believe that this will substantially impact the target choice or proposed rationale.

EXECUTIVE SUMMARY

ACTION PLANNING

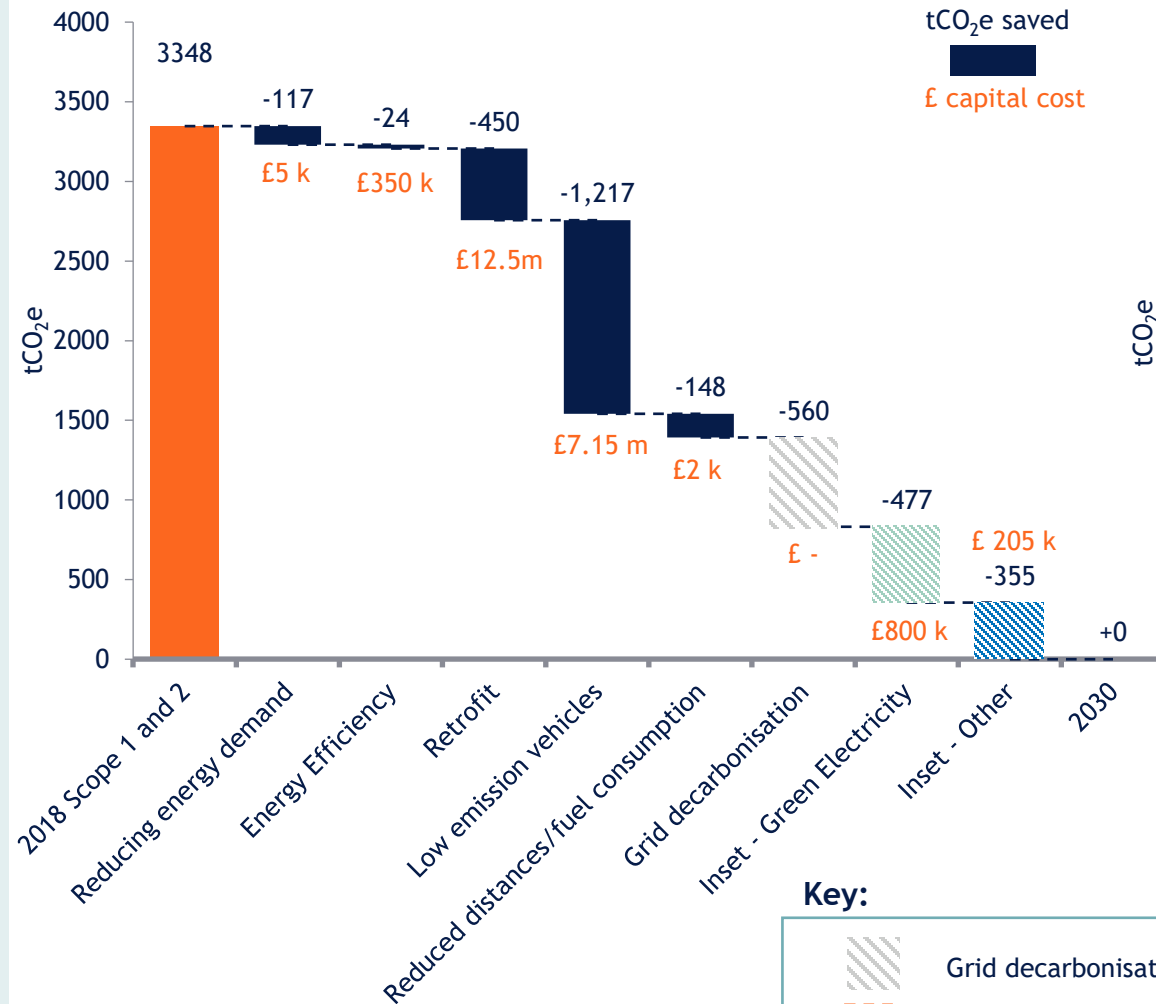
Results

Our analysis reviewed carbon reduction opportunities grouped across four sectors (see pg. 8 onwards). We provided estimates of carbon reduction and costs where appropriate. These estimates are based on proxies and should be used only to provide an idea of the magnitude of cost or saving, and should not be viewed as an investment grade cost-benefit analysis. It is recommended HDC should perform more robust estimates.

In Scope 1 & 2, council led actions have the potential to reduce HDC emissions by 58%, with the biggest reduction achieved through switching to low emission vehicles. The residual emissions, after grid decarbonisation, are 832tCO₂e. This “gap to target” could be addressed through green electricity generation and other insetting based activities.

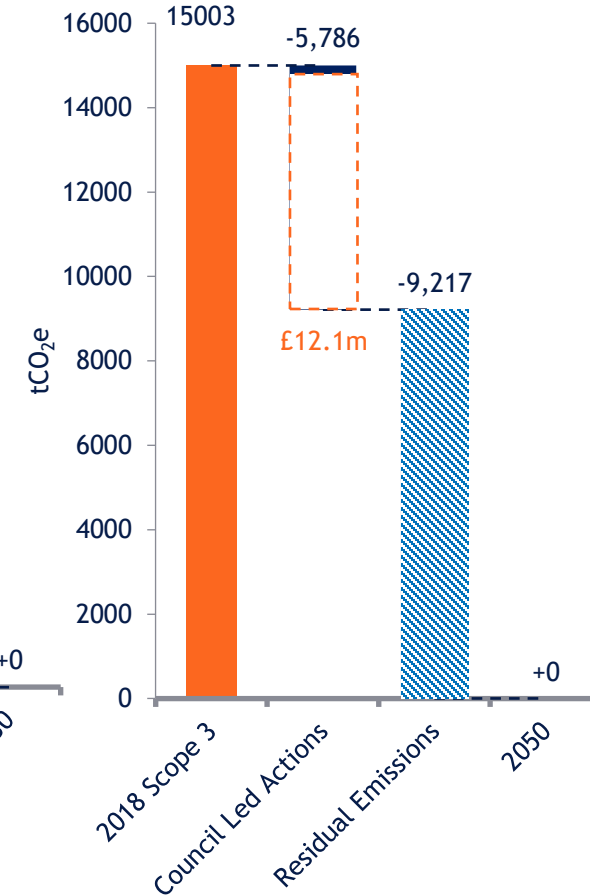
In Scope 3, where we advise a 2050 target, council led reductions could achieve a 36% reduction, the vast majority of which comes from sustainable procurement. The residual emissions are significant, illustrating the need for offsetting or Authority Based Insetting.

Figure 1: Aggregation of the various council-led carbon savings relevant to Scope 1&2, with associated cost estimates.



*Please note these categories do not directly reflect each priority as this includes only actions that impact Scope 1 and 2.

Figure 2: As in Figure 1, for Scope 3



EXECUTIVE SUMMARY

ACTION PLANNING

“The difference in cost between targets is less about absolute cost and scale of investment, and more about timing and when the investment is made”

How to think about costs

Cost considerations are a natural priority when making a climate commitment. Targets with the same end point in theory require the same level of investment. This implies that the difference between targets is less about absolute cost and scale of capital investment, and more about the timing and when the investment is made. However, there are a few other cost impacts that in reality, may apply (see below). Who pays is also considered in the full report.

There are benefits in moving sooner:

There may also be associated ‘costs of inaction’ in delaying action.

For example:

- Health and economic impacts and co-benefits can be realised earlier
- Costs of retrofitting are more expensive than building properties lower-carbon first time. The [Committee on Climate Change](#) estimates this could be 5-times more.
- Lower operational costs of buildings will pay-back sooner, especially if energy prices increase or you were going to replace certain assets anyway at some point in the future.
- You are less likely to incur costs associated with climate change and more frequent extreme weather events, if you play your full part to keep within the recommended carbon budget.
- Your role as a leader may inspire other organisations and help to stimulate the market, allowing future economies of scale to be realised by others, along with the other benefits above.

However, there may also be additional costs:

These may be linked to subsequent economies of scale being generated as demand for low carbon technology and services increases.

For example:

- Manufacturing costs *may* fall as production of low carbon technology is scaled up
- Supply of skilled labour *may* become more accessible and greater over time
- Marginal technology efficiency improvements *may* continue over time too (but no ‘silver bullet’ or transformational change in low carbon technology is anticipated in the next 5-10 years)

Higher

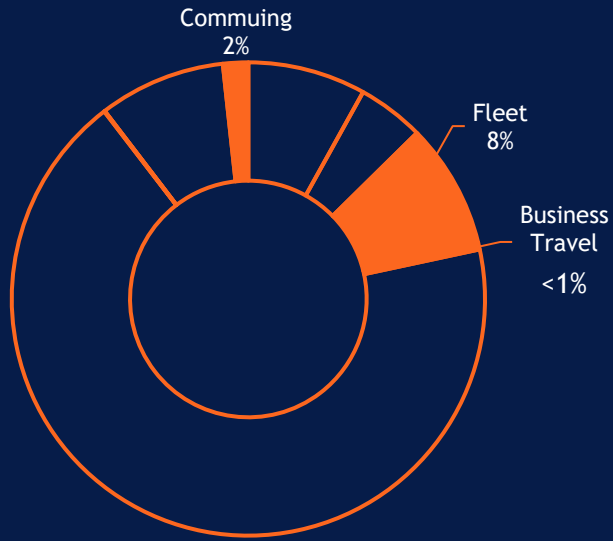
Certainty

Lower

EXECUTIVE SUMMARY

ACTION PLANNING

TRANSPORTATION & FLEET



Total 2018/19 footprint with emissions from Transport and Fleet highlighted.

11% of total footprint

63% of Scope 1 emissions

Priority 1: Demand reduction

Reduce car journeys by employees by reducing the distance travelled/fuel consumption and encouraging alternative modes of transport.

Actions	Description
Route Optimisation for Refuse Collection Vehicles (RCVs)	Explore route optimisation software and monitoring for reducing mileage of refuse collection vehicles and the number of vehicles.
Eco-training for drivers	Equip any drivers of council vehicles with the necessary knowledge to more appropriately plan journeys to help make driving more efficient and reduce fuel consumption.
Working from Home assessment	Conduct travel survey of staff to calculate footprint to inform working from home policies. It is necessary to assess this given that the carbon savings achieved through reducing travel may not be balanced by the additional energy required to heat homes.
Greener commuting	Encourage active travel or public transport for commuting through offering incentives and providing facilities to support this.
Reducing overall business travel and encouraging active travel modes for necessary business travel	Encourage active travel or public transport for business travel through offering incentives and providing facilities to support this.

Priority 2: Alternative Fuels

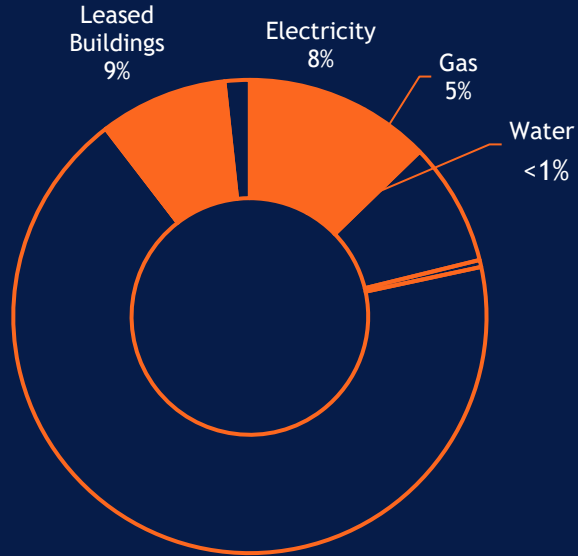
Switch to alternative low carbon vehicles and fuel for council fleet.

Actions	Description
Increase EV charging infrastructure	Continue to work with West Sussex CC to co-ordinate installation of charge points in the district as well as onsite charge points.
Trial low carbon Large Goods Vehicles (LGVs)	Ultimately, HDC should aim for zero carbon HGVs, however there is yet to be an established alternative. Therefore, HDC should seek funding to trial low carbon LGVs/HGVs and alternative fuels, with the long term goal to switch all LGVs. Estimates provided are based on switching to electric RCVs.
Switch to EV cars/vans	Switch 100% of car/van fleet to electric vehicles when undergoing fleet replacement.

EXECUTIVE SUMMARY

ACTION PLANNING

PROPERTY



Total 2018/19 footprint with emissions from Property highlighted.

21% of total footprint

63% of Scope 1 and 2 emissions

12% of Scope 3 emissions

Priority 1: Behaviour Change

Reducing energy demand based on how the buildings are used.

Actions	Description
Better report & feedback on energy consumption	Report on carbon emissions from buildings annually and feedback to staff.
Mandate consumption data from tenants	Work with tenants to gather carbon footprint or energy consumption data. In order to assess any progress made by tenants, data needs to be provided. The current method for estimation is based on typical consumptions per building type so will not reflect reductions achieved or support investment cases.
Raise staff awareness through carbon literacy training	Raise awareness of energy demand reduction activities amongst staff through a campaign and training.
Guidance for tenants	Produce guidance for tenants on energy efficiency (technology and behaviour change) and renewable energy supply.
Decommission buildings	If there is a long-term behavioural shift of staff to working from home then the council could explore decommissioning buildings. However, it is important that these emissions are not just passed onto the others in the district and it is encouraged that decommissioned buildings are sold for redevelopment.

Priority 2: Energy Efficiency

Reduce energy demand from council properties through improving building fabric and installing energy efficient appliances.

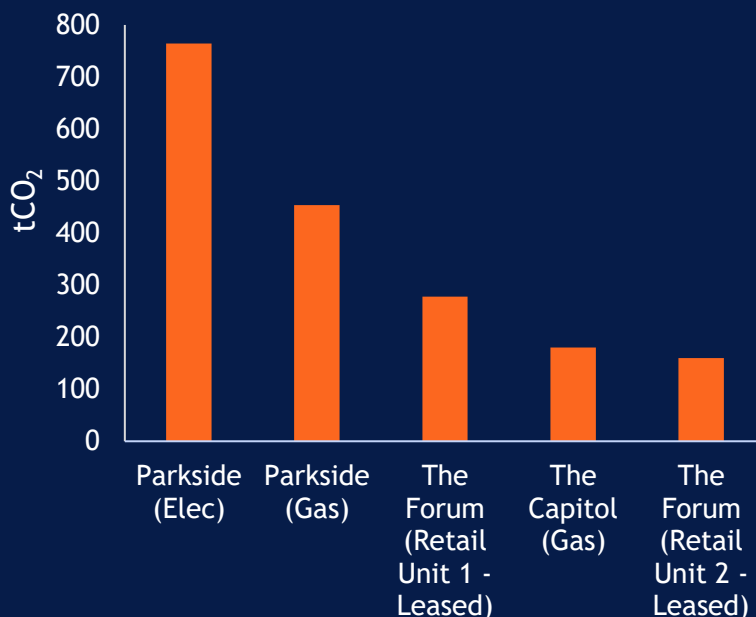
Actions	Description
Embed carbon into asset management strategy	Integrate low-carbon retrofit into maintenance cycles and ensure carbon impact is considered in the operation of buildings. This will highlight opportunities where assets are to be replaced anyway, and costs for low-carbon substitution are therefore more marginal and more easily justified.
Lobby national government	Lobby national government to increase the standards of building regulations and energy efficiency.
Retrofit owned buildings	Retrofit own-building stock to increase efficiency by upgrading insulation and heating systems.

EXECUTIVE SUMMARY

ACTION PLANNING

PROPERTY CONTINUED

Top 5 property emission sources (all scopes)



Priority 2: Energy Efficiency

Actions	Description
Energy saving technologies	Ensuring that lights and appliances used in council buildings are the most energy efficient option.
Energy saving technologies	For public lighting on streets and in car parks, the council should ensure they are operating at maximum energy efficiency.
Retrofit properties let out when tenancies end	Seek opportunities when properties are vacant to retrofit/improve energy efficiency.

Priority 3: Green Energy

Any remaining supply after demand reductions have been implemented should be supplied with green energy.

Actions	Description
Increase renewable energy supply	Consider generating own low carbon energy supply with renewables e.g. solar

Priority 4: New Properties

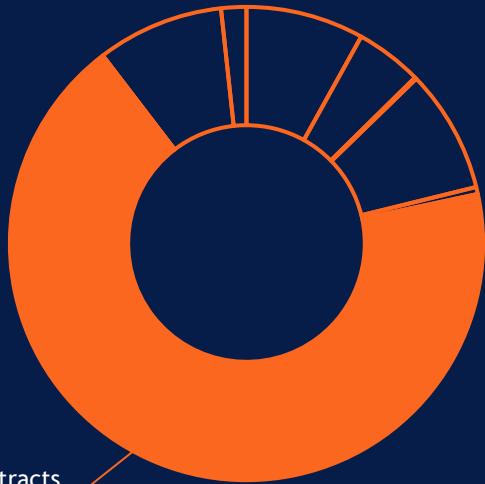
Ensure that any new property built or bought into the portfolio meeting the highest green building standards. This is key for limiting the increase in the councils footprint with growth of the property portfolio.

Actions	Description
Lobby national government	Lobby national government to increase the standards for new properties in terms of energy efficiency. This is not intended to serve as a substitute for progressing other actions.
High green building standards for new properties	If Council were to develop new property ensure it is designed in line with the highest green building and energy performance standards e.g. LEED or BREEAM. AECB and PassivHaus standards for residential property

EXECUTIVE SUMMARY

ACTION PLANNING

PROCUREMENT & CONTRACTS



Total 2018/19 footprint with emissions from Procurement highlighted.

68% of total footprint

83% of Scope 3 emissions

Priority 1: Sustainable Procurement

Drive carbon reductions from contractors and suppliers through implementing sustainable procurement policies and processes

Actions	Description
Effective contract management	Encourage more effective contract management and monitor contracts commitments to hold suppliers to account. This is essential in ensuring commitments made on sustainability criteria are delivered.
Better supplier data and reporting	Collection of more detailed data on suppliers and requirement for suppliers to report their carbon footprint back to the council. This is necessary to monitor if progress is made. Methods currently rely on a carbon footprint per £ spent which will not reflect reductions.
Increased weighting of social value	Consider increasing the weighting of social value in criteria to ensure that sustainability has a greater influence in evaluation.
Sustainable procurement policy	Introduce a sustainable procurement policy or charter.
Supplier requirements	Require suppliers to set SBTs/have a climate strategy or target.

EXECUTIVE SUMMARY

ACTION PLANNING

PARKS & COUNTRYSIDE



HDC owns and manages approximately 400 hectares of green space

Following the Greenhouse Gas Protocol, the carbon footprint of HDC's operations does not account for the impact of the district's Parks and Countryside on the wider footprint.

It is important to consider HDC's natural capital for its potential to 'offset'. It is recommended that HDC prioritise offsetting that is within the boundary and that maximises co-benefits e.g. natural capital also benefits water quality, biodiversity, recreation, water flow and flood mitigation.

Priority 1: Sequestration Mapping

Carry out mapping to identify existing natural capital stock, opportunities to enhance it and offsetting requirements.

Actions	Description
Assessment of carbon sequestration of current land and identify opportunities to increase sequestration	Review existing data on land-use in the district to identify opportunities for carbon sequestration through nature-based climate solutions. Sequestration opportunities could take the form of tree and hedgerow planting, or restoration of ecosystems including wetlands, peatland, grasslands, pasture, and soils. Mapping of the district as a whole would also be beneficial for a wider offsetting strategy.

Priority 2: Protect and Enhance

Deliver the protection and enhancement opportunities identified in the mapping exercise.

Actions	Description
Develop an offsetting strategy	Define the principles and priorities the council wishes to follow when approaching offsetting to achieve carbon neutrality e.g. certified status, out-of-boundary initiatives and insetting potential.
Impose more ambitious carbon requirements on land being considered for development	Explore potential opportunities through the planning system and local plan for either 1) acquiring land or 2) requiring developers to better manage land that is subject or adjacent to development.
Integration of low-carbon agenda with Wilder Horsham District	Wilder Horsham District is a five-year partnership between Sussex Wildlife Trust and HDC that aims to help wildlife thrive. The primary aim is not related to carbon but there is overlap in protecting natural capital and engagement with land owners.
Explore opportunities to transfer ownership to wildlife trust	By transferring ownership it may increase the capacity of staff to develop nature based solutions.
Protect current natural capital stock	A key part of natural capital action is protecting the current stock from degradation.
Heathland restoration	Continuing to restore and protect heathland in the region which is an important carbon sink.
Increase natural capital stock	Increase tree and hedgerow planting and green infrastructure on existing land or acquired land to offset residual emissions.

EXECUTIVE SUMMARY

ACTION PLANNING

Key Next steps

HDC should review the action plan internally, allocating stakeholders to ensure accountability. Where possible, demand reduction and decarbonisation should be prioritised over offsetting. When considering costs, the council should develop more robust costings and funding options.

The table summarises the annual reductions in carbon emissions and the cost associated with each priority action (not including enabling actions). The carbon savings have been presented for the 2030 target date. Where a quantitative estimate of a cost was not available, a qualitative description has been provided.

Sector	Action Group	Annual tCO ₂ Saving	Capital Costs	Operational/ Revenue Costs	Time & Resource (FTE)	Savings/Payback	Notes
Transport	Priority 1	310	£2,000	£2,000	2-3 months	Reduced fuel costs	Includes some installation of bike facilities.
	Priority 2	1,217	£7,150,000	Electricity cost, repairs	0	£5,315,000 (lifetime fuel savings and tax)	Carbon savings based on switching RCVs and cars/vans to electric. Cost - based on additional costs and savings for electric vehicles (over diesel/petrol). Does not include renewable electricity generation.
	<i>Sub Total</i>	1,527	£7,152,000	£2,000	2-3 months		
Property	Priority 1	137	£0	£5,000	0.5 FTE	Reduced energy bills	Based on carbon literacy training.
	Priority 2	612	£24,950,000	Energy bills, maintenance	1 FTE	Reduced energy bills	Based on residential retrofit to energiesprong standard. Non-domestic saving takes the lower estimate and costs are based on HDC scaling of a previous audit.
	Priority 3	1,063	£800,000	Energy bills, maintenance	0	Revenue generation	Based on 1MW heat pump but other options are available. This is not based on an assessment of required capacity.
	Priority 4	N/A		N/A	N/A	N/A	Not included in savings as it is based on limiting increases in emissions
	<i>Sub Total</i>	1,812	£25,750,000	£5,000	1.5 FTE		
Parks & Countryside	Priority 1 & 2	355	£205,000	Maintenance	1 FTE		Based on tree planting to offset residual emissions, does not consider existing stock.
Procurement	Priority 1	5381	£0	£0	0		Sustainable Procurement Policy is assumed to incorporate carbon reduction targets already being addressed through an SBT.
Total		9,075	£33,107,000	£7,000	2.5 FTE		

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