OxIS Logic Mapping
1) General Background & Methodolgy

Logic maps are widely used in the appraisal process for new interventions as a framework to enhance the focus and robustness of scheme evaluation. Logic mapping is a systematic and visual way of presenting the key steps required in order to turn a set of resources or inputs into activities that are designed to lead to a specific set of changes or outcomes. Logic maps are read from left to right, representing a time sequence from the initial concept through implementation to short and long term results.

These logic maps are intended to be non-scheme specific to provide a consistent framework to the appraisal of specific schemes. This means that there may be very specific local characteristics which are not reflected in these logic maps.

This logic mapping has followed detailed DfT guidance on the use of logic maps:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/3817/logicmapping.pdf

2) Contents Navigation

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IF1A: Zero Carbon (e.g. District, Heat Pumps) Heat Schemes - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-OGB target to achieve net zero carbon by 2040 and within Districts across various other years *[1] [2]* -Energy Technologies Institute Report (2018) identifies that low carbon fuels could meet half of UK heat demand while reducing national decarbonisation costs by £3bn. *[3]* -Around a third of UK's total carbon emissions comes from heat energy. 85% of UK households use gas for heating (SGN, 2021) *[4]* -Heat networks reduce carbon emissions otherwise generated from fossil fuel-based heating (UK Government, 2020) *[5]* -The CCC estimate that around 18% of UK heat will need to come from heat networks by 2050 if the UK is to meet carbon reduction obligations *[6]* -Heat networks are cost-effective and can cut heating bills for customers (domestic and commercial) and are one of the most cost-effective ways of reducing carbon emissions (UK Government, 2020) *[5]* -Oxfordshire Energy Strategy identifies that by 2030 40% of heat requirement needs to be met by renewables to achieve decarbonisation targets. *[7]* -Successive academic studies demonstrate that heat networks can reduce levels of NO2 by reducing use of conventional gas boilers (Ravina et. al (2018)) *[8]* -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) *[9]* -Bill savings of at least 30% have been achieved when replacing electric heaters with district heat networks in tower blocks. In this way heat networks can help battle against fuel poverty. *[10]* -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [11]	-Local Engagement between developers or existing residents / businesses (depending if new scheme or retrofit) -Forecast of likely future demand -Development of scheme design -Construction / upgrade work	**Heat Network** -District heating network providing heating to a large community **Heat Pumps** -Completed heat pump in building(s)	**Heat Network** -Enables delivery of short & medium term housing & employment sites in Local Plans and the Oxfordshire Local Industrial Strategy (2019) -Potential to have a minor beneficial impact on fuel poverty. -Minor reduction in local NO2 emissions and improved air quality (scheme scale dependent) -Reduction in domestic and commercial carbon emissions from buildings -Enables delivery of future housing sites in Local Plans (Scheme Dependent) **Heat Pumps** -Minor reduction in local NO2 emissions and improved air quality -Potential to have a minor beneficial impact on fuel poverty. -Reduction in domestic and commercial carbon emissions from buildings	**Heat Network** -Reduction in carbon emissions from heating buildings -Supports ambition to achieve net zero carbon targets **Heat Pumps** -Reduction in carbon emissions from heating buildings -Supports ambition to achieve net zero carbon targets	-Enables clean economic growth and employment -Enables long term clean and green delivery of local services e.g. healthcare, education -Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire (scheme dependent)

Sources
[1] https://www.oxfordshiregrowthboard.org/wp-content/uploads/2021/01/6.-Appendix-One-Oxfordshire-Strategic-Vision-10-3-21.pdf [Accessed 23/04/21]
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[3] https://d2umxnkyjne36n.cloudfront.net/insightReports/District-Heat-Networks-in-the-UK-Final.pdf?mtime=20181105145836 [Accessed 23/04/21]
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[8] https://www.researchgate.net/publication/325706008_District_heating_system_Evaluation_of_environmental_and_economic_aspects [Accessed 23/04/21]
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IF1B: Electricity Transmission Schemes (e.g. line reinforcement, substation upgrade) - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) *[1]* -Insufficient capacity of existing electricity transmission infrastructure to accommodate growth (SSEN, 2020) *[2]* -OxLEP Energy Strategy (2020) has a key objective for *'smart, modern clean energy infrastructure - including increased electricity grid capacity - which supports planned housing'* *[3]* -Electricity Safety, Quality & Continuity Regulations (2002) identifies need to ensure that electricity supplies are: 'regular and efficient', 'protect the public from dangers' [4] -SEPD has internal standards with Long Term Development Statement to 'improve quality of supply and reduce duration of supply interruptions' [2] -Target to achieve net zero carbon by 2040 and within Districts across various other years [5] [6] -The sale of new petrol and diesel cars will be banned by 2030 which will significantly accelerate the uptake of electric vehicles and place additional demand on the UK's electricity grid network (Ten Point Plan (HM Government, 2020); Future Energy Scenarios 2020 (National Grid, 2020); Oxfordshire Electric Vehicle Infrastructure Strategy (OCC, 2021)) [7] [8] [9] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [10]	-Engagement between SEPD and developers / District local plan team to understand capacity impact. -Forecast of likely future impact on electricity demand based on future projections. -Development of capacity scheme upgrade design -Construction / upgrade work	-Higher capacity electricity transmission network -Retirement of previous transmission infrastructure asset (if applicable)	-Enables / unlocks planed short term and medium term housing and employment growth delivery within Local Plans and Local Industrial Strategy (2019). -Ensures continued regular & efficient electricity supply for residents - fulfilling statuory obligations and internal SEPD targets.	-Builds in future resilience to accommodate potential future growth in Oxfordshire Plan 2050. -Builds in additional electricity network capacity for electric vehicle charging infrastructure.	-Supports long term employment and economic growth -Potential to induce additional uptake of electric vehicles to reduce carbon emissions, improve air quality and reduce noise. -Enables continued and long term delivery of local services e.g. healthcare, education -Additional housing has the potential to improve housing affordability and retain talent within Oxfordshire

Sources

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[2] https://www.ssen.co.uk/WorkArea/DownloadAsset.aspx?id=12286 [Accessed 20/04/21]
[3] https://www.oxfordshirelep.com/sites/default/files/uploads/Oxfordshire%20Energy%20Strategy.pdf [Accessed 23/04/21]
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IF1C: Gas Supply Upgrade Schemes - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [1] -Insufficient capacity of existing heating / energy transmission infrastructure to accommodate growth (SGN LTDS 2020) [2] -Around 85% of UK households use gas for heating (SGN, 2021) [3] -OxLEP Energy Strategy (2020) has a key objective for 'smart, modern clean energy infrastructure - including increased electricity grid capacity - which supports planned housing'. [4] -SGN has a statutory obligation to provide gas supplies and maintain service standards (SGN LTDS 2020). [2] -The Energy White Paper (2020) proposes to consult on whether it is appropriate to end gas grid connections to new homes being built from 2025 in favour of cleaner alternatives. [5] -There is a target in the Energy White Paper (2020) that by the mid-2030s, all newly installed heating systems should be low-carbon or appliances that can be converted to a clean fuel supply e.g. hydrogen [5] -The Energy White Paper (2020) identifies that to 'achieve net zero emissions; we need to transition completely away from traditional natural gas boilers for heating homes on the gas grid' [5] -SGN forecasts an increase of 0.84% and 0.27% in in the South LDZ (SGN LTDS 2020) [2] -Target to achieve net zero carbon by 2040 and within Districts across various other years [6] [7] -Gas boilers are responsible for emitting NO2 emissions (Ravina et. al (2018)) [8] -SGN have an aspiration to switch to hydrogen networks as a replacement for natural gas (SGN LTDS 2020).[2] -According to Public Health England data (2019), air pollution is the biggest environmental threat to health in the UK responsible for between 28,000 and 36,000 deaths a year. [9]	-Engagement between SGN / WWU and developers / District planning team to understand capacity impact. -Forecast of likely future impact on gas demand based on future projections. -Development of capacity scheme upgrade design -Construction / upgrade work	-Increased capacity gas transmission network -Retirement of previous transmission infrastructure asset (if applicable)	-Enables / unlocks planed short term housing, industrial and commercial growth delivery within Local Plans. -Ensures continued / new gas supply for residents - fulfilling statuory obligations and internal SGN/WWU targets	-Potential for increased carbon emissions from reliance on fossil fuel based heating sources -Potential for minor detrimental impact on air quality due to continue reliance on gas boilers	-Supports short term delivery of future wider local services e.g. healthcare, education -Additional housing has the potential to improve housing affordability to retain talent within Oxfordshire -Poorer air quality may have a minor detrimental impact on health inequalities in locality (location specific)

Sources

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692093/Oxfordshire_Housing_and_Growth_Deal_-_Outline_Agreement.pd f [Accessed 23/04/21]
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[9] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf [Accessed 23/04/21]

IF2A: Active Travel Scheme - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Physical inactivity costs the NHS £8.2bn (DfT, 2020) [1] -There is a Oxfordshire Growth Board target to achieve net zero carbon by 2040. The OCC Climate Action Framework (2020) notes that increasing active travel is a key component of achieving this. [2] [3] -Transport currently contributes to around a third of all carbon emissions in Oxfordshire (BEIS, 2018) [4] -Active travel a key component of 20 minute neighbourhoods / communities where people live within a 20 minute walk or cycle of everyday services and needs - research shows that people are generally happy to walk for 20 minutes (80% of journeys under a mile are made on foot) (Sustrans, 2020; Sport England) [5] [6] -There are several Air Quality Management Areas (AQMAs) throughout Oxfordshire as a result of NO2 and PM10 levels being above legal limits as a result of ICE traffic (Air Quality Action Plans). Studies demonstrate that increasing active travel at a national level would lead to savings of £567m annually from air quality and prevent 8,300 premature deaths (DfT, 2020) [1] [7] -Exercise proven to cut the risk of depression by 31% (DfT, 2020) [1] -Regular physical activity reduces risk of chronic diseases including breast cancer by 20%, colon cancer by 30%, type 2 diabetes by 40%, cardiovascular disease by 35% (DfT, 2020) [1] -Regular physical activity can reduce all-cause mortality rates by 30% (DfT, 2020) [1] -Cycling contributes £5.4bn to the economy (DfT, 2020) [1] -National (e.g. Gear Change) and County (LTP4 (2016) & LTCP (2021) objectives to increase active travel [1] -There are arterial roads throughout Oxfordshire where noise levels are in excess of 75dbs, whilst Oxford is a designated noise management area. [8] -2020 study demonstrated that safety and the perception of safety remains the biggest barrier to cycling. This is echoed in 2019 Oxfordshire survey where 42% of cyclists identified specific safety issues (OCC, 2019) [9] -Of all recorded KSI collisions in 2019 in Oxfordshire, around 30% involved active modes (OCC, 2019) [10] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [11]	-Scheme development & design -Stakeholder Engagement to determine route selection and design -Research into best practice including accounting for UK Government design principles	-Complete connected walking & cycle route	*Short Term* -Increased knowledge of safe / convenient cycle routes -Increased motivation to cycle *Medium Term* -Enhanced road safety for people cycling (scheme dependent) -Modal shift from car to active travel -Increase in more inclusive cycling e.g. increased proportion of women -Supports delivery of residential and employment growth identified in District Local Plans and Oxfordshire Local Industrial Strategy -Increased levels of physical activity	-Reduction in transport related carbon emissions -Improved air quality levels and noise (scale and location dependent) -Improved wellbeing & mental health -Reduced levels of mortality, premature deaths and health inequalities (scheme and scale dependent) -Increased Oxfordshire GVA (scale dependent) -Widened economic inclusion -Reduced premature deaths / health inequality -Better social integration of communities	-Additional housing has the potential to improve housing affordability to retain talent within Oxfordshire

Sources

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf [Accessed 23/04/21]
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IF2B: Bus, Coach & Rapid Transit Priority Scheme - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-The UK Government has an ambition to 'secure a long term, sustained improvement in bus services' in their National Bus Strategy in 2021. The BSIP requirement identified in the NBS identifies an ambition for improved bus journey time reliability (UK Government, 2021) [1] -According to a study by Mackie et al. (2012), bus users generate £64bn of economic output each year and contribute to around a third of city centre spending [2] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [3] -Evidence from a 2020 Transport Focus study of bus passengers' priorities for improvement identified that the key priorities for improvement should be focused on buses running more often, going more places, ensuring that buses run on time and faster journey times. [4] -Buses play a key role in tackling air quality as a result of transport- both through modal shift and through the use of greener technology [1] -There is an OGB target to achieve net zero carbon by 2040. Given road transport currently contributes to around a third of all carbon emissions in Oxfordshire (BEIS, 2018), the Climate Action Framework notes that facilitating modal shift away from car travel to public transport and enabling safe, convenient and electric public transport is key to achieving this. [5] [6] [7] -A study by Besser & Dannenberg (2006) demonstrate that use of public transport can provide a significant boost to physical activity levels compared to using a private car to travel [8] -Study by Gates et al. (2019) on behalf of DfT demonstrates that 'those who depend more on the bus network to participate in the labour market tend to be lower paid, live in areas of deprivation, and are more likely to turn down employment due to transport limitations'. [9] -Study by Mackie et al. (2012) identified that 19% of bus users had turned down a job due to the quality of the bus service at some point in time. It also identified that 61% of people would give access to a better job if the bus was faster [2] -Data from the Oxford Bus Company identifies that bus speeds in the centre of Oxford are now 38% slower than in 2006 and they have to increase the number of buses by around a third to meet timetables. [10] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [11]	-Scheme development & design -Stakeholder Engagement to determine optimum infrastructure type & locations -Research into best practice	-Complete connected bus priority infrastructure / rapid transit infrastructure	*Short Term* -Increased reliability of bus / rapid transit journey times between communities. -Potentially reduced overall journey tme for bus / rapid transit between communities -Increased knowledge of convenient bus / rapid transit routes *Medium Term* -Potential for modal shift from car to bus / public transit -Minor increase in levels of physical activity in journeys to and from bus / rapid transit halts -Supports delivery of housing and employment growth identified in District Local Plans and the Oxfordshire Local Industrial Strategy	-Improved connectivity between Oxfordshire's communities by bus / rapid transit -Reduction in transport related carbon emissions (scale specific) -Improved air quality levels (scale and location specific) -Increased Oxfordshire GVA -Widened economic inclusion due to increased accessibility of the labour market -Reduced premature deaths / health inequality -Widened economic inclusion -Better social integration of communities	-Potential for minor improvement in wellbeing & mental health -Reduced levels of mortality, premature deaths and health inequalities -Additional housing has the potential to improve housing affordability to retain talent within Oxfordshire

Sources

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IF2C: Rail (New or Enhanced Stations & Capacity Improvements) - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Existing rail infrastructure in Oxfordshire is not sufficient to meet growing demand as a result of future growth identified in District Local Plans to build 100,000 new homes by 2031 and the emerging Oxfordshire Plan 2050 (Oxfordshire Rail Corridor Study, 2021) [1] [2] -Network Rail forecasts rail freight to increase significantly to 2043 which is a core element of reducing vehicular based trips for the transportation of goods which has environment benefits (ORCS, 2021) [1] -There is a national and County target to achieve net zero carbon by 2050. Given road transport currently contributes to around a third of all carbon emissions in Oxfordshire (BEIS, 2018), the Climate Action Framework notes that facilitating modal shift away from car travel to public transport and enabling safe, convenient and electric public transport is key to achieving this. [3] [4] -The Local Industrial Strategy (2019) emphasises the key role that rail has in delivering the vision of making Oxfordshire a word-leading innovation ecosystem and boost productive economic growth [5] -A study by Besser & Dannenberg (2006) demonstrate that use of public transport can provide a significant boost to physical activity levels compared to using a private car to travel [6] -There is an emerging nature recovery network for Oxfordshire adopted by the Oxfordshire Environment Board with an aspiration for habitat and biodiversity restoration [7] -There are higher levels of noise along Oxfordshire's rail corridors [8]	-Scheme development & design -Stakeholder & community engagement to determine optimum infrastructure type & locations and construction impact -Planning application process (new stations)	-Complete capacity enhancement / rail station	**Increased Rail Capacity** *Short Term* - Unlocks housing & employment growth identified in Local Plans and Local Industrial Strategy -Increased capacity of rail network; both for passenger & freight services -Improved generalised journey time & reliability of using rail to travel within and outside of Oxfordshire (improved connectivity) -Potential for increased rail frequency enhancements serving local communities *Medium Term* -Increased attractiveness of rail for passengers -Marginally increased noise levels for people living in communities alongside rail network (scheme dependent) -Modal shift from car to rail -Modal shift from road based freight to rail freight -Increase in levels of physical activity in journeys to and from stations -Potential for habitat and biodiversity loss (scheme dependent) **New Stations** Short Term -Unlocks housing & employment growth identified in Local Plans and Local Industrial Strategy (Location Specific) -Improved generalised journey time & reliability of using rail to travel within and outside of Oxfordshire -Increased accessibility of using rail for local community (improved connectivity) *Medium Term* -Modal shift from car to rail -Increase in levels of physical activity in journeys to and from stations -Increased attractiveness of rail -Potential for detrimental impact on nature recovery network (scheme dependent)	-Builds in some resilience to emerging Oxfordshire Plan 2050 growth -Reduction in transport related carbon emissions as a result of modal shift -Improved air quality levels as a result of modal shift -Increased Oxfordshire GVA & employment -Widened economic inclusion due to increased accessibility of the labour market -Potential for some reduced noise levels from traffic	-Potential for improved wellbeing & mental health -Potential for reduced levels of mortality, premature deaths and health inequalities (scale dependent) -Additional housing has the potential to improve housing affordability to retain talent within Oxfordshire

Sources

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IF2D: Road Scheme (New Road or Additional Capacity) - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is a OGB target to achieve net zero carbon across Oxfordshire by 2040. Given road transport currently contributes to around a third of all carbon emissions in Oxfordshire (BEIS, 2018), the CAF & CCC evidence notes that facilitating modal shift away from car travel to sustainable modes is key to achieving this. [1] [2] [3] -Road transport a significant contributory factor to harmful levels of NO2 and PM10 in Oxfordshire and the designation of a series of AQMAs. According to Public Health England data (2019), air pollution is the biggest environmental threat to health in the UK responsible for between 28,000 and 36,000 deaths a year. [4] -Physical inactivity costs the NHS £8.2bn (Gear Change, 2020) [4] -OCC has a statutory obligation as highways authority to enhance road safety. In 2019, there were 1389 collisions on Oxfordshire's Roads, of which 70% involved motorised vehicles (OCC, 2019). [5] -There are arterial roads throughout Oxfordshire where noise levels are in excess of 75dbs, whilst Oxford is a designated noise management area. Successive studies (e.g. Hegewald et al. 2020) have demonstrated that noise can have negative effects on mental health. [6] -Study by Rui Anciaes et al. (2016) demonstrates that motorised road traffic can contribute to the physical and psychological separation of neighbourhoods, with possible effects on the health and wellbeing of local residents through community severance. [7] -Successive studies demonstrate that those in more deprived communities spend a lower proportion of their total income on travel, travel less and use cars less but at the same time are reliant on cars despite the cost - a concept badged as 'forced car ownership' (Curl et al. 2018) [8] -The Local Industrial Strategy (2019) identifies that the growing Oxfordshire population is putting a strain on road infrastructure from a capacity perspective. [9] -A study in the BMJ (Anderson et al. (2019) demonstrated there is a strong correlation between car ownership and a reduction in physical activity & increased weight gain [10] -The LTP4 aspires to develop the County's road network to reduce congestion and minimise disruption and delays [11] -A comprehensive review of existing studies undertaken on behalf of the UK Government (2018) identifies that additional road capacity induces traffic. Estimates from successive studies indicate an elasticity of 0.2 across the whole road network (i.e. 10% road capacity increase could lead to 2% traffic inducement) [12] -There is an emerging nature recovery network for Oxfordshire adopted by the Oxfordshire Environment Board with an aspiration for habitat and biodiversity restoration [13]	-Scheme development & design -Stakeholder & community engagement to determine allignment -Planning application and roads consent process	-Complete road scheme	*Short Term* -Potential for reduced congestion and improved journey times by road within Oxfordshire and to external destinations -Increased attractiveness of car use -Increased road capacity to support additional demand for residential and employment growth identified in Local Plans and Local Industrial Strategy -Potential for habitat and biodiversity loss (scheme dependent) *Medium Term* -Increased GVA through enhanced internal & external County connectivity. -Potential for inducement of additional car use (scale and scheme dependent) -Potential for increased carbon emissions as a result of induced traffic. -Potential for excarbated noise and air quality levels as a result of induced traffic (scheme dependent). May also result in a minor net positive impact where traffic is being relocated from an AQMA -Potential for improved road safety e.g. by removing conflicts at junctions (scheme dependent) -Potential for increased flood risk as a result of surface run-off (scheme dependent) *Note that logic maps 2A - 2B should also be used where the road scheme is integrated e.g. with active travel and / or bus priority*	-Detrimental impact on health inequalities (e.g. premature deaths) as a result of detrimental impact on air quality (scheme dependent) -Potential to have a minor negative impact on mental health as a result of increased noise levels (scheme dependent) *Note that logic maps 2A - 2B should also be used where the road scheme is integrated e.g. with active travel and / or bus priority*	-Improved housing affordability has the potential to retain talent with Oxfordshire *Note that logic maps 2A - 2B should also be used where the road scheme is integrated e.g. with active travel and / or bus priority*

Sources
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IF2E: Traffic Management Scheme (e.g. Low Emission Zone, LTN, Parking Restrictions) - Logic Map

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is a OGB target to achieve net zero carbon across Oxfordshire by 2040. Given road transport currently contributes to around a third of all carbon emissions in Oxfordshire (BEIS, 2018), the CAF & CCC evidence notes that facilitating modal shift away from car travel to sustainable modes is key to achieving this. [1] [2] [3] -Road transport a significant contributory factor to harmful levels of NO2 and PM10 in Oxfordshire and the designation of a series of AQMAs. According to Public Health England data (2019), air pollution is the biggest environmental threat to health in the UK responsible for between 28,000 and 36,000 deaths a year. [4] -Physical inactivity costs the NHS £8.2bn (Gear Change, 2020) [4] -Oxfordshire County Council has a statutory obligation as highways authority to enhance road safety. In 2019, there were 1382 collisions on Oxfordshire's Roads, of which 70% involved motorised vehicles. [5] -There are arterial roads throughout Oxfordshire where noise levels are in excess of 75dbs, whilst Oxford is a designated noise management area. Successive studies (e.g. Hegewald et al. 2020) have demonstrated that noise can have negative effects on mental health. [6] -Study by Rui Anciaes et al. (2016) demonstrates that motorised road traffic can contribute to the physical and psychological separation of neighbourhoods, with possible effects on the health and wellbeing of local residents through community severance. [7] -There are several Air Quality Management Areas (AQMAs) throughout Oxfordshire as a result of NO2 and PM10 levels being above legal limits as a result of ICE traffic (Air Quality Action Plans). Studies demonstrate that increasing active travel at a national level would lead to savings of £567m annually from air quality and prevent 8,300 premature deaths (Gear Change, 2020) [4] -Successive studies have demonstrated that Low Emission Zones have been highly effective at reducing air pollution and achieve a reduction in NO2 by up to 36% (e.g. London LEZ)	-Scheme development & design -Stakeholder & community engagement -Planning application and roads consent process	-Completed Traffic Management Scheme	**Short Term** -Increased cost (scheme dependent) and inconvenience of car use to travel within designated area -Increased ease of travel by active modes through traffic managed area **Medium Term** -Reduced number of cars accessing the traffic managed area and potential re-routing -Potential for localised modal shift within the traffic managed area to active modes e.g. walking & cycling. Potential for localised increase in physical activity. -Potential for increased uptake of electric vehicles to avoid charges (scheme dependent)	-Reduced transport related carbon emissions -Improved levels of air quality through reduced NO2 and PM10 emissions -Reduced noise levels within traffic managed area -Potential for increased levels of physical activity -Improved mental health & welbeing through lower traffic levels in traffic managed area -Potential road safety benefits within traffic managed area for active modes	

Sources

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IF2F: Electric Vehicle Charging Infrastructure

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is a OGB target to achieve net zero carbon across Oxfordshire by 2040. Given road transport currently contributes to around a third of all carbon emissions in Oxfordshire (BEIS, 2018), the CAF & CCC evidence notes that facilitating modal shift away from car travel to sustainable modes is key to achieving this. [1] [2] [3] -The sale of new petrol and diesel cars will be banned by 2030 which will significantly accelerate the uptake of electric vehicles and place significant additional demand for suitable charging infrastructure (Ten Point Plan; National Grid, Future Energy Scenarios 2019) [4] [5] -Physical inactivity costs the NHS £8.2bn (Gear Change, 2020) [6] -There are arterial roads throughout Oxfordshire where noise levels are in excess of 75dbs, whilst Oxford is a designated noise management area. Successive studies (e.g. Hegewald et al. 2020) have demonstrated that noise can have negative effects on mental health. [7] -Study by Rui Anciaes et al. (2016) demonstrates that motorised road traffic can contribute to the physical and psychological separation of neighbourhoods, with possible effects on the health and wellbeing of local residents through community severance. [8] -There are several Air Quality Management Areas (AQMAs) throughout Oxfordshire as a result of NO2 and PM10 levels being above legal limits as a result of ICE traffic (Air Quality Action Plans). Studies demonstrate that increasing active travel at a national level would lead to savings of £567m annually from air quality and prevent 8,300 premature deaths (Gear Change, 2020) [6] -The Oxfordshire Electric Vehicle Infrastructure Strategy identifies that one of the leading reasons for people not switching to electric vehicles is anxiety over charging provision. This identifies a need for increased charging infrastructure for electric vehicles (OCC, 2021) [9] -Evidence suggests electric vehicles are much quieter than combustion engine vehicles at lower speeds. They are broadly comparable beyond speeds of 50km/h due to the impact of tyre contact [10]	-Scheme development & design -Stakeholder & community engagement -Planning application and roads consent process	-Completed charging scheme or hub	*Short Term* -Increased public awareness of the availability of charging infrastructure and the consequent convenience of switching to using electric cars or vans *Medium Term* -Increased number of people purchasing electric cars or vans - switching from ICE vehicles.	-Reduced transport related carbon emissions -Improved levels of air quality through reduced NO2 and PM10 emissions otherwise seen through ICE vehicles -Reduced noise levels at lower speeds -Potential for reduced health inequalities (depending on scheme scale and location) -Potential for improved mental health and wellbeing (depending on scheme scale and location) -Supports increased GVA and longer term employment for Oxfordshire	

Sources

[1] https://data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/emissions-of-carbon-dioxide-for-local-authority-areas [Accessed 17/05/21]
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IF3A: Flood Alleviation Scheme e.g. Barriers, Channels or Storage Areas & 3B SuDS

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-OGB target to achieve net zero carbon by 2040 and within Districts across various other years [1]. The Oxfordshire Climate Action Framework and UK Climate Change Risk Assessment (2017) identifies reducing impacts from climate change as a key priority [2] [3] -Analysis from the Met Office and CCC demonstrate that as a result of climate change by mid century, there is likely to be an increase overall of 59% more rainfall in winters and an increase in heavy rainfall events by at least 10% which will increase the likelihood of flooding occuring. [4] [5] -Oxfordshire has large parts of the County located in areas of high flood risk - mainly around the Thames Valley [6] -Experiencing damage caused by extreme weather such as storms or flooding can increase the chance of facing mental health problems such as stress and depression by 50% while a quarter of people who have been flooded still live with these issues at least two years after the event (Environment Agency, 2020) [7] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [8] -Low income households eight times more likely to live in tidal floodplains than more affluent households, but 61% of low-income renters do not have home contents insurance, meaning they're more susceptible to a financial shock as a result (Environment Agency, 2020) [7] -For every household directly affected during a large flood, about 16 people suffer knock-on effects from losses of utility services (Environment Agency, 2019) [9] -Flooding can have a notable economic impact, with the estimated economic impact in 2019 nationally being £333 million [9] -Research by the University of Oxford identified that over two thirds of homes in England are served by infrastructure sites and networks located in or dependent on others located in, areas of high flood risk. This includes 11% of all strategic roads, 77% of all strategic rail, 43% of wastewater, 51% of potable water, and 21% of electricity. [9] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [9] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [10]	-Scheme development & design -Stakeholder & community engagement -Planning application proces	-Completed flood alleviation scheme	*Short Term* -Reduced risk to flooding and damage to properties during heavy rainfall events *Medium Term* -Increased resilience to additional heavy rainfall events as a result of the changing climate. ***For integrated schemes (e.g. with green infrastructure) refer to logic maps IF7A***	-Potential for increased opportunity for access to green space (scheme dependent) ***For integrated schemes (e.g. with green infrastructure) refer to logic maps IF7A***	-Additional housing has the potential to improve housing affordability to retain talent within Oxfordshire -Improved levels of mental health through avoiding flooding events -Increased economic output through the avoidance of flooding events -Increased transport network resilience through the avoidance of flooding events -Increased utilities resilience through the avoidance of flooding events -Reduced socio-economic inequalities through the avoidance of flooding events ***For integrated schemes (e.g. with green infrastructure) refer to logic maps IF7A***

Sources

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IF4A: Early Years Education Facilities

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is a 5% attainment gap Early Years for children in BAME communities in Oxfordshire (Childrens and Young Peoples Plan 2018 - 2022) [1] -The JSNA (2021) identifies that in academic year ending 2019, early years educational attainment results were above the SouthEast average in South Oxfordshire and West Oxfordshire but below average in Cherwell, Oxford and Vale of White Horse. [2] -Sucessive studies demonstrate that early years education has a positive effect on children's educational, cognitive, behavioural and social outcomes (Sylva et. al 2013; Melhuish et al. 2015). [3] [4] -Increasing access to early years infrastructure can alert famillies to Healthy Start Programme which helps to address health inequalities by providing children with a healthy diet (UK Government, 2017) [5] -Early years education facilities provide healthy meals free from distraction which can help reduce health inequalities in later life. They also provide structured physical activity (NICE Obesity Prevention Pathway, 2021) [6] -Early Year Infrastructure has been proven to provide a key lifeline for immigrants to an area who have limited family connections and assist in social integration (Pascal & Bertram, 2013) [7] -Nurseries are proven to improve young perople's ability to communicate, learning and social development (Tickell, 2011) [8] -Early Years Infrastructure support parents attend adult education programmes, work longer hours and contribute postively to economic growth (Pascal & Bertram, 2013) [7] -Early Years Infrastructure addresses gender-specific socio-economic inequality and allows women to return to work (Pascal & Bertram, 2013) [7] -Early childhood education helps prepare young people to suceed in school and is proven to allow young people to work in higher paid jobs and contribute more significantly to the econmy (Pascal & Bertram, 2013) [7] -Children attending early years education proven to reduce crime in later life (Tickell, 2011) [8] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [9] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [10]	-Scheme development & design -Stakeholder & community engagement -Planning application proces	-Early Years Education Infrastructure	*Short Term* - Improved social integration of communities - particularly new families moving to Oxfordshire -Increased access to spaces for physical activity for young people through access to structured programme *Medium Term* - Enhanced educational attainment for children -Positive contribution to Oxfordshire's economic growth due to additonal potential for parents to return to work.	-Potential for improved health inequality (location specific) -Reduced socio-economic inequalities	-Potential minor positve impact on reduced levels of crime in later life -Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire (scheme dependent)

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IF4B & IF4C: Primary & Secondary Schools

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is a statutory need for OCC to ensure there are enough school places available for children and young people (Education Act 1996; Education and Inspections Act 2006; Children's & Families Act 2014) [1] [2] [3] -The OCC Pupil Place Plan (2019) identifies the impact of future housing growth on education capacity. It highlights the need for school investment to ensure a high % of parents can access their first choice school [4] -The OCC Pupil Place Plan (2019) highlights the role that investment in local school capacity can have in encouraging a greater proportion of journeys to school to be made by active travel modes [4] -Schools play a pivotal role in helping to develop positive physical activity habits in younger people by raising awareness of the importance of regular physical activity [5] -On-site community sport facilities provided at schools can support increased levels of physical activity in the surrounding area [6] -School-based health centers, where available, can offer access to critical health services, including primary, dental, and mental health. This can reduce inequalities [7] -A local school is deemed by the IMD index to be critical to creating a local community and reduce geographical access inequalities to local services [8] -High performing schools can support increased participation in arts and cultural activities (Arts Council, 2020) [9] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). Schools are critical to unlocking this growth [10] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [11]	-Scheme development & design -Stakeholder & community engagement -Planning application proces	-Completed primary or secondary school -Completed community sport facilities (scheme dependent)	*Short Term* -Enables housing delivery identified in District Local Plans -Boosts proportion of parents accessing their first choice school. -Potential to promote a greater proportion of local children to access school by active modes (scheme and context specific) -Reduces geographical isolation in relation to accessing local services (scheme and context specific) *Medium Term* -Potential to promote higher levels of physical activity amongst children and in the community (scheme and context specific) -Potential to support higher participation in arts and culture (scheme specific) -Supports community cohesion	-Provides some future resilience for housing growth through the Oxfordshire Plan 2050	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire (scheme dependent)

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IF4D: Special Educational Needs (SEN) Schools

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-The Children's & Families Act (2014)makes it a requirement for local authorities to provide services and support for children and young people aged 0-25 with Special Educational Needs and / or Disabilities (SEND). [1] -The JSNA (2021) identifies that in 2019, the early results for pupils with Special Educational Needs support (SEN) increased from 19% to 25% and the gap with other pupils in Oxfordshire decreased from 58 to 53 percentage points. [2] -The JSNA (2021) identifies that the % of pupils with SEN support without statements at schools in Oxfordshire is now 2.2 percentage points above the rate for England. [2] -People with learning disabilities die, on average, 20 years earlier than the general population but many of these premature deaths could be avoided by giving these patients equal access to healthcare services (Northway, 2019) [3] -There is currently a deficit of SEN places within Oxfordshire and the Special Educational Needs & Disability Sufficiency of Places Strategy (2018) identifies there is an urgent need to increase the number of places within Oxfordshire schools to meet existing and future demand from housing growth. [4] [5] -Evidence from SEN schools indicates that this additional support results in a 10% increase in young people supported into employment and independent living (SEND Code of Practice 2015). [6] -SEND is proven to support pupils achieve their best and make a successful transition to adulthood, whether employment, further or higher education / training (SEND Code of Practice 2015) [6] -SEN schools have clear mechanisms to support young people's mental health and wellbeing; particularly those with pre-existing mental health conditions. Evidence from the National Clinical Practice Guidelines published by the British Physchological Society identify that children with learning or physical disabilities have a greater risk of developing a mental health problem compared to the national average (Department for Education, 2018) [7] -SEN schools support pupils with physical or mental health specialist support e.g. access to counsellors, physios and therapists. [8] -SEN schools provide access to structured physical activity with adapted facilities for play and leisure which can also relieve pain caused by some disabilities and increase range of movement and/or flexibility [8] -The Oxfordshire SEND Strategy (2019-2022) identifies that SEN schools can support people with SEND to feel safer in their community. [4] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). Schools are critical to unlocking this growth [9] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [10]	-Scheme development & design -Stakeholder & community engagement -Planning application proces	-Completed SEND school	*Short Term* -Provides additional SEN capacity for existing and future growth to help address the current deficit of places -Increased access to physical activity for young people with SEND -Improved access to health services for young people with SEND *Medium Term* -Increased educational attainment for pupils with SEND -Promotes confidence and feeling of community safety for pupils with SEND	-Increased economic output from people with SEND going on to additional training or employment -Improved health inequalities and improved healthy life expectancy	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF4E: Adult Education Facilities (e.g. Learning Centres)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-The UK Government's Jobs Plan (HM Treasury, 2020) alongside the Build Back Better: A Plan for Growth Strategy (HM Treasury, 2021) emphasises the strategic need to upskill people to ensure employers' needs are met in the future and to guarantee a strong recovery from the COVID-19 crisis [1] [2] -White Paper 'Skills for Jobs: Lifelong Learning for Opportunity and Growth,' (Department for Education, 2021) sets out several reforms to post-16 technical education and training and places employers firmly at the heart of the skills system. This reiterates the skills need stating 'there are currently significant skills gaps at higher technical levels. We do not have enough technicians, engineers or health and social care professionals to meet the many vital challenges we face.' [3] -Oxfordshire's Local Industrial Strategy (OxLEP, 2019) identifies the strategic need to make Oxfordshire a top three global innovation ecosystem by 2040. A key element of fulfilling this ambition is a strategic need to ensure that the county has a pool of world-class talent which are aligned to the requirements of businesses. [4] -Oxfordshire's Economic Recovery Plan (OxLEP, 2021) notes the need to 'maximise investment made in Oxfordshire's skills and training infrastructure' [5] -Sucessive studies demonstrate the beneficial impact participation in adult education has on mental wellbeing and social interaction (e.g. Waller et al. 2018) [6] -Study by Sabetes (2021) demonstrates that the impact of learning on employment possibilities is a key area for poverty reduction. In addition, Adult education with provision of financial literacy and support to access public funds can help fill the gap in financial services for low-income, disadvantaged families [7]	-Scheme development & design -Stakeholder & community engagement -Planning application proces	-Completed facility	*Short Term* -Increased capacity of adult education facilities and courses -Increased awareness of adult education opportunities *Medium Term* -Increased participation levels in adult education and reduced rate of NEET in local area ***Where there is a combined facility (e.g. with a community centre), refer to Logic Map IF8A***	-Support stronger recovery from COVID-19 e.g. higher productive employment -Potential to reduce local deprivation levels in surrounding community (scheme specific) -Supports ambition to make Oxfordshire a global innovation ecosystem by 2040 -Supports improved levels of mental health & reduced levels of isolation ***Where there is a combined facility (e.g. with a community centre), refer to Logic Map IF8A***	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire ***Where there is a combined facility (e.g. with a community centre), refer to Logic Map IF8A***

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IF5A: Full Fibre (Giga-Bit Capable) Broadband Scheme

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). Most District Local Plans make it a policy requirement to provide access to 'SuperFast' Broadband within the delivery of new sites. [1] [2] -There is a OGB ambition to achieve net zero carbon by 2050 (OGB, 2021). The Oxfordshire Climate Action Framework alongside the Local Transport & Connectivity Plan as well as the District Local Plans identifies the critical role that developing digital connectivity has in reducing travel emissions and the wider negative impacts given this will *'replace many journeys.'* [2] [3] [4] [5] -The Oxfordshire Digital Infrastructure Strategy (2020) aspires to achieve full fibre broadband by 2033 for all residents & businesses across the County. [6] -The National Infrastructure Strategy (2020) identifies that digital infrastructure helps rural businesses, innovate growth and create jobs as well as attracting and retaining young people and families within communities. [7] The NIS (2020) identifies that high quality digital infrastructure can deliver social & wellbeing benefits [7] -The Digital Infrastructure Strategy for Oxfordshire recognises the importance of digital infrastructure as being a key enabler for transforming people's lives - particularly in improving healthcare delivery and social care services. [6] -Oxfordshire's Local Industrial Strategy emphasises the importance of the role that digital infrastructure investment will play in fostering a sucessful innovation ecosystem and productive employment across Oxfordshire that can compete at a global level. [8] -The NIS (2020) identifies that the provision of full fibre will unlikely be commercially viable for around 15% of areas within Oxfordshire where targetted capital investment is needed [7] -The delivery of full fibre (gigabit capable) is key enabling infrastructure to allow for 5G infrastructure [6] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [9]	-Scheme development & design -Stakeholder & community engagement -Digital infrastructure provider procurement	-Completed full fibre network	*Short Term* -Improved digital connectivity including access to full fibre and increased download speeds (giga-bit capable) -Depending on local context, may unlock growth identified in Local Plan -Enables future 5G infrastructure provision *Medium Term* -Potential for reduced travel commuting demand from some people as a result of increased ability to work remotely. -Benefits for increased wellbeing through enhanced social connectivity -Improves Oxfordshire's reputation as a global innovation ecosystem	-Increased economic growth & GVA benefits -Stimulation of additional inward investment to enhance and deliver on the vision to make Oxfordshire a global innovation ecosystem -Reduced carbon emissions as a result of avoided travel from some commuters increased frequency of working remotely (Scale dependent) -Improved air quality and reduced noise levels as a result of travel being avoided from some commuters increased frequency of working remotely (Scale dependent)	-Enables further capacity & increased opportunity for enhanced digital provision of healthcare services. -Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF6A: Innovation Research & Development Hub / Lab

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is an ambition within the Oxfordshire Industrial Strategy (2019) & Investment Plan (2020) to make Oxfordshire a globally leading innovation ecosystem by 2040 [1] [2] -The Industrial Strategy identifies that an innovation ecosystem *'must be anchored by national or international keystone assets'* - including national researhch facilities, world class industry clusters and knowledge-intensive assets. This is essential to attract and retain top talent. [1] -There is a national policy requirement to achieve net zero carbon emissions by 2050. Investment in climate change innovation assets (depending on nature) have the potential to create breakthrough solutions in energy and climate change action for wider national and international benefit [3] -Evidence from Public Health England (2019) demonstrates that people in *'good work'* - defined as jobs which are safe, secure, autonomous and with good line management and communication - have a higher level of health and wellbeing / quality of life. [4] -There is clear evidence (e.g. PHE 2019) that unemployment is bad for your health as it is associated with an increased risk of mortality & morbidity [4] -Having local access to places of employment is a core part of creating sucessful liveable communities (MCHLG, 2019) [5] -Oxfordshire has large parts of the County located in areas of high flood risk - mainly around the Thames Valley [6] -ONS Study (2021) identified that areas with a higher concentration of younger people (aged 16-24) and areas with higher rates of unemployment tended to have higher rates of loneliness during the COVID-19 crisis [7]	-Scheme development & design -Stakeholder & community engagement -Partnership working -Planning application and approval process -Construction process	-Completed innovation hub / lab	*Short Term* -Enhances Oxfordshire's reputation as a global business innovation ecosystem -Positively contributes to the creation of liveable communities [location specific] *Medium Term* -Increased Oxfordshire productive employment -Potential to increase surface run-off which may be detrimental to flood risk (Scheme Dependent)	-Increased economic growth & GVA benefits -Stimulation of additional inward investment to enhance and deliver on the vision to make Oxfordshire a global innovation ecosystem -Benefits for mental health & wellbeing and reduced health inequalities through boosting *'good'* employment -Potential for reduced levels of loneliness	-Postive contribution to the development of solutions for climate change and energy innovation which may have wider societal benefits to reducing carbon emissions and achieving net zero by 2050 [Scheme Specific]

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IF7A&7B: Green & Blue Infrastructure Schemes (e.g. Parks, Woodlands, Habitat Restoration, & Nature Reserves)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-There is a requirement in NPPF, District Local Plans & Habitat Regulation Assessments to protect and enhance habitats in the planning of new development sites. [1] [2] -Oxfordshire's Strategic Vision 2050 aspires to achieve a net gain in biodiversity in Oxfordshire. [3] -People with good access to green space 24% more likely to be physically active (Investing in Oxfordshire Green Infrastructure 2020). This has significant benefits in reducing health inequalities and the risk of premature death. [4] -Green infrastructure near rivers worth £6000 per year per hectare for its flood regulation benefits (OCC 2020) [4]. Oxfordshire has large parts of the County located in areas of high flood risk - mainly around the Thames Valley [5] -Intergenerational and/or volunterring activities in the natural environment have the potential to enhance social cohesion (OCC 2020). [4] -Studies shown a strong correlation between greener neighbourhoods and lower rates of crime levels. Residences closer to natural spaces have much lower levels of recorded crime (Shepley et al. 2019; Forest Research 2005) [6] [7] -Oxfordshire's rural woodlands remove 400 tonnes of air pollutants & save £6.5bn in healthcare costs per year (OCC 2020) [4] -Noise reduction of 1 decibel in Oxfordshire worth £8m p.a. to the local economy (OCC 2020) [4] -Oxfordshire's woodlands currently remove 175,000 tonnes of CO2 per year (OCC 2020) [4] -People spending time in nature proven to lower stress levels and improve mental wellbeing (Barton & Rogerson 2017) [8] -The Oxfordshire Industrial Strategy (2019) identifies that *'to attract people, business and investment, an innovation ecosystem needs to have thriving commnities. these must be healthy, sustainable, provide a high quality of life and support both urban and rural living. They must be affordable, well-connected and have a vibrant community and cultural offer.'* Green infrastructure supports these principles. [9] -Dawson et al. (2006) found that for many participants the walks were not just about providing physical activity; equally important was the increased opportunity for social interaction and contact. [7] -OGB target to achieve net zero carbon by 2040 and within Districts across various other years [9]. The Oxfordshire Climate Action Framework identifies a target to double tree cover in Oxfordshire can support in achieving this [11] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). Green infrastructure schemes identified to support this [12] -There is an emerging nature recovery network for Oxfordshire adopted by the Oxfordshire Environment Board with an aspiration for habitat and biodiversity restoration [13]	-Scheme development & design -Stakeholder & community engagement -Research into best practice -Scheme delivery & construction (if applicable)	-Completed Green Infrastructure scheme	*Short Term* -Enhanced natural environment and increased opportunity to support nature recovery networks and biodiversity restoration (scheme location and scale specific). -Increased accessibility of green space to local community. *Medium Tem* -Potential for increased local physical activity levels -Improved local mental health & wellbeing -Increased opportunities for social cohesion and intergenerational community integration.	-Reduced pollutants and improved local air quality -Increased resilience to flood risk as a result of climate change [Scheme Location Specific] -Reduced health inequalities through reduced risk of premature death and mental health as a result of physical activity and access to outdoor space. -Increased absorption of carbon emissions -Increased Oxfordshire GVA	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire -Potential for improved community safety and lower crime rates

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IF8A: Community Centres & Hubs

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Community group activities such as exercise, cooking, befriending, arts and crafts activities have been proven to improve mental health and wellbeing (Jones et al. 2013) [1] -Before and after study of the effects of community group activities showed that people had enhanced mental health, general health and personal and social wellbeing as a result of attendance of group activities [1] -Community halls provide a focal point for social integration to tackle loneliness and foster a sense of place for Oxfordshire's communities in Oxfordshire (Community First Oxfordshire 2021) [2] -Community Centres can play a key role in enabling community based physical activities to take place (Active Oxfordshire 2021) [3] -Study by Joseph Rowntree Foundation (2011) identified that the benefits of community centres include improved access to services and activities, jobs, training and business opportunities. [4] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Local Plans identify Community facilities support social cohesion in forming new communities. [5]	-Scheme development & design -Stakeholder & community engagement -Scheme delivery & construction	-Completed community centre scheme	*Short Term* -Improved opportunities for local community engagement and a space for hosting activities including physical activity, services, jobs, networking and training workshops. -Supports delivery of housing identified in District Local Plans *Medium Tem* -Increased social integration and community cohesion -Potential for increased physical activity levels -Improved local mental health & wellbeing -Potential for enhanced opportunity for skills development through access to space for training workshops	-Increased levels of physical activity could result in reduced levels of mortality, premature deaths and health inequalities (location and scale specific) -Improved skills development has the potential to tackle socio-economic inequalities in Oxfordshire -Increased Oxfordshire GVA	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF8B: Cultural Service Facility (e.g. Libraries)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). [1] -Upcoming OCC Libraries and Heritage Strategic Framework will denote that impact from growth likely to be put a strain on current cultural services (OCC,2021) [2] -Active Lives Survey shows that the use of library services in Cherwell is 6 percentage points lower than the national average (Arts Council England, 2018) [3] -Studies demonstrate that libraries can support in the reduction of digital exclusion, particularly in rural areas (Strover et al. 2019) [4] -Research by Hicks et al. (2010) found that libraries provide a space for group activities (e.g. reading groups), supporting mental health and reducing loneliness [5] -Research by the Arts Council (2014) found that libraries in rural areas can play a key role in reducing isolation for older people [6]	-Scheme development & design -Stakeholder & community engagement -Scheme delivery & construction	-Completed community service facility	*Short Term* -Supports housing growth identified in District Local Plans -Increased capacity (and accessibility) of local library services -Increased local awareness of library services *Medium Term* -Increased library attendance and participation -Potential to reduce isolation and support community integration (particularly in rural areas) -Potential to enhance mental health in surrounding community	-Potential to address socio-economic inequalities (scheme and scale specific)	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF9A: Indoor Sport Facility (e.g. Leisure Centre, Swimming Pool) & 9B: Outdoor Sport Facility (e.g. Sport Pitches)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Strong local and national policy aspiration to increase physical activity levels and physical wellbeing e.g. Oxfordshire Health & Wellbeing Board (2019); OGB (2021); DfT (2020) [1] [2] [3] -Obesity and inactive lifestyles costs the Oxfordshire GVA £547,000,000 annually (OCC 2020) [4] -Exercise cuts risk of depression by 31% (DfT, 2020) [3] -Regular physical activity reduces risk of chronic diseases including breast cancer by 20%, colon cancer by 30%, type 2 diabetes by 40%, cardiovascular disease by 35% (DfT, 2020). [3] -There is an established evidence base that participation in sport and physical activity is proven to promote social inclusion of communities and reduce loneliness (Pels, 2016) [5] -A study by Brosnan (2017) identifies a strong correlation between sports participation and crime. The results across England between 2012 and 2015 demonstrate that a 10% increase in sport participation led to a fall in person crimes of between 1.3 and 1.6% and a fall in property crimes of 0.64 and 0.7% [6] -There is established evidence through Sport England's Active Lives Study which shows that those living in more deprived communities are less physically active. Evidence from the Healthy for Life study by Active Oxfordshire demonstrated that of the estimated 99,000 people that are physically inactive across Oxfordshire, over a third are from lower-socio economic groups. [7] [8] -Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Local Plans identify sport and leisure facilities support this. [9] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [10]	-Scheme development & design -Stakeholder & community engagement -Scheme delivery & construction	-Completed scheme	*Short Term* -Increased accessibility and capacity of sport and physical activity participation (scheme dependent) *Medium Term* -Increased physical activity levels in local area -Improved mental health and wellbeing -Improved community social cohesion and reduced loneliness -Reduced levels of anti-social behaviour & crime	-Reduced health inequalities and improved healthly life expectancy -Increased Oxfordshire GVA -Reduced socio-economic inequalities	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF10A: Primary & Community Healthcare Infrastrucure (e.g. Health Centres)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Infrastructure Delivery Plans e.g. Vale of White Horse (2018) identify a series of primary healthcare infrastructure key to unlocking growth. [1] [2] -The Oxfordshire CCG Primary Care Estates Strategy (2020) identifies that significant growth in Oxford, Didcot, Bicester, Wantage, Kidlington and Abingdon will *'adversely affect'* access to primary care services and GP practice resilience without targetted investment. [3] -The Primary Care Estates Framework estimated that over 200 new consulting rooms would be needed to accommodate population growth to 2030 (increase of 20%) [3] -CCGs have a statutory obligation under the Health and Social Care Act (2012) to have regard to the need to reduce inequalities between patients with respect to their ability to access health services, and reduce inequalities between patients with respect to outcomes achieved through primary and community health service provision (NHS England, 2018). [4] -GPs tackle health inequalities by providing medical care and helping patients navigate a complex health systems e.g. through enhanced community nurse outreach/clinics or reduced waiting times can reduce health inequalities; particularly for people with underlying health conditions. (Hutt & Gilmour, 2011) [5] -Primary care providers, such as GPs, are often the first point of contact for people experiencing mental health problems and getting help for other related problems like loneliness. (NHS Mental Health Implementation Plan, 2019) [6] -A GP is deemed by the IMD index to be critical to creating a local community and reduce geographical access inequalities to local services [7] -Approximately 71% of Oxfordshire's communities are within a 15 minute cycle of their nearest GP (DfT, 2019), however, there is significant variation [8] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [9]	-CCG led scheme design and site location appraisal -Community engagement and consutation -Planning Application Submission -Construction	-Completed primary healthcare infrastructure	*Short Term* -Enabling growth identified in Local Plans for additional housing -Increased capacity of primary and community based healthcare provision -Reduced access inequality and travel distance for healthcare services (scheme and location dependent) -Supports creation of liveable communities through provision of a core local amenity (location dependent) *Medium Term* -Reduced health inequality (scheme and location dependent) -Improved access to gateway mental health service support	-Potential to build additional resilience for future growth identified in OP2050 [Scheme Dependent]	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF10B: Adult Social Care Infrastructure (e.g. Care Homes, Extra Care Housing)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). [1] -The Care Act (2014) places a statutory obligation on OCC to support the District Councils in ensuring sufficient capacity of social care services [2] -The Oxfordshire Market Position Statement (OCC, 2019) identifies that both growth and an ageing population will place additional demand upon social care services [3] -Social care connects the hardest to reach groups to resources and services and reduce the impact of health inequalities (Bywater, 2009; Coren et al. 2010) [4] [5] -Meaningful activities within care homes is proven to improves vulnerable people's mental wellbeing (Nursing Times, 2014; Coren et al. 2010) [6] [5] -Doing group activities within a care home setting is proven to reduce loneliness (Nursing Times, 2014) [6] -Oxfordshire's ageing population will put additional strain on the need for additional care home capacity in future (Oxfordshire JSNA, 2021) [7] -Utilising social care capacity reduces in-patient stay in hospitals, which is operationally more cost-effective for the NHS (Bywater, 2009) [4] -NICE guidance older residents in care homes (2013) identifies that residents in care homes have improved health service access to primary and community care which can reduce impact on hospitals in the longer term. [8] -The total direct, indirect and induced value of the adult social care sector in the UK was estimated to be 2.6 million jobs and £46.2bn in 2016 (The Economic Value of the Adult Social Care Sector, 2017) [9] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [10]	-Scheme design and site location appraisal -Community engagement and consutation -Planning Application Submission -Construction	-Completed social care infrastructure	*Short Term* -Supporting growth identified in Local Plans for additional housing -Increased capacity of adult social care healthcare provision *Medium Term* -Reduced health inequality and socio-economic inequalities -Improved access to primary care services - Improved social integration -Improved mental health and wellbeing	-Potential to build additional resilience for future growth identified in OP2050 [Scheme Dependent] -Increased economic output and job creation	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

Sources

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IF11A: Waste & Recycling Processing Facility (e.g. Household Waste Recycling Centre, Waste Transfer Station)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Local Plans identify waste processing infrastructure as important to enable this growth [1] -The OCC Resource and Waste Strategy (2018) identifies that forecast significant forecast housing will place additional demand upon waste collection & processing services [2]. -Waste disposed of to landfill sites, incineration or through the treatment of waste water is estimated to be responsible for around 5% of the UK's greenhouse gas emissions, with methane being responsible for 92% of emissions (BEIS, 2020) [3] -Moving towards a more circular economy approach has the potential to create opportunties for economic growth and job creation. There is a potential identified in Oxfordshire's Resource and Waste Strategy to promote increased reuse at HWRCs. [2] -There is an aim to recycle or compost at least 70% of all household waste by March 2030 in Oxfordshire [2] -Studies demonstrate that people living in close proximity to landfill or incineration sites can be exposed to air pollutants, albeit this is generally below legal limits (Sonibare et al. 2019). [4] -Increased recycling rates reduces natural environment resource depletion whether through forestry loss or habitat loss (Friends of the Earth UK, 2021). [5] -Increasing recycling rates has the potential to reduce energy use compared to creating materials from new raw materials. For example, making paper from pulped recycled paper uses 40% less energy than making it from raw wood fibres (Friends of the Earth UK, 2021) [5] -Recycling food waste can generate compost which can be used to grow plants or crops (Friends of the Earth UK, 2021) [5] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [6]	-Scheme design and site location appraisal -Community engagement and consutation -Planning Application Submission -Construction	-Completed waste processing infrastructure	*Short Term* -Enabling growth identified in Local Plans for additional housing and in Oxfordshire Industrial Strategy in relation to employment -Additional waste processing capacity -Additional recycling capacity (Scheme Dependent) *Medium Term* -Reduced carbon emissions through a reduction in the proportion of waste sent to landfill or incineration (scheme dependent) -Improved air quality for people in proximity to landfill or incineration sites *(scheme dependent)*	-Potential to build additional resilience for future growth identified in OP2050 [Scheme Dependent] -Inducing a transition to a more circular reuse economy has the potential to create new jobs across Oxfordshire. -Potential for increased food waste recycling to support biodiversity restoration (scheme dependent)	-Increased recycling rates can reduce natural environment and biodiversity depletion -Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire -Supports long term delivery of key local services e.g. healthcare, education

Sources

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IF12A: Wastewater Treatment Infrastructure (e.g. Wastewater Treatment Plants)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [1] -There is a legal requirement set out in the Water Resources Act (1991) and the Environment Permitting Regulations (2010) which set out water pollution offences which aim to prevent and minimise the pollution of waterways. [2] [3] -Oxfordshire's Strategic Vision has an aspiration to *'improve the quality of our waterways and water bodies and reduce levels of water stress in Oxfordshire'* [4] -There is a priority identified in the UK Government's 25 Year Environment Plan to reduce the frequency of sewage outflows to support aquatic biodiversity restoration (DEFRA, 2018) [5] -Evidence from the Environment Agency National Incident Recording System identifies that there were four incidents in Oxfordshire in 2019 deemed to have a significant and localised impact on water quality - particularly around Witney. Most of these were attributed to sewage outflows. [6] -The future impacts of climate change will place more pressure on wastewater infrastructure, including a risk of flooding impacting the efficiency of wastewater treatment works and drainage assets (Thames Water, 2021) [7] -The impacts of climate change combined with increased demands from population increase has the potential to impact upon sewer outflows and resultant water quality in river courses without additional investment in wastewater infrastructure capacity (Thames Water, 2021). [7] -Experiencing damage caused by extreme weather such as flooding can increase the chance of facing mental health problems such as stress and depression by 50% while a quarter of people who have been flooded still live with these issues at least two years after the event (Environment Agency, 2020) [8] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [9]	-Scheme design and site location appraisal -Community engagement and consutation -Planning Application Submission -Construction	-Completed wastewater treatment infrastructure	*Short Term* -Enabling growth identified in Local Plans for additional housing and within the Oxfordshire Local Industrial Strategy for employment -Additional wastewater processing capacity *Medium Term* -Improved water quality due to a reduction in sewage outflow events -Increased resilience to climate change impacts from sewer floodin*g*	-Potential to build additional resilience for future growth identified in OP2050 -Potential to support habitat restoration and nature recovery in watercourses as a result of improved water quality	-Avoiding sewer flooding incidents improves mental health and wellbeing. -Positive contribution to Oxfordshire's GVA as a result of supporting reducing flooding incidence & severity. -Supports long term delivery of key local services e.g. healthcare, education -Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF12B: Potable Water Supply Infrastructure (e.g. Water Transfer Stations, Reservoirs)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes) [1] -Climate change will impact upon the available water supply through extreme weather events such as drought which is likely to disrupt the secure supply of water (Thames Water, 2020) (Thames Water, 2017) [2] [3] -Thames Water forecasts that with the impact of population growth and climate change by 2045, there will be a shortfall of 387 million litres of water per day in the Thames Water catchment area (Thames Water, 2020). In the SWOX area where Oxfordshire is located, the deficit is forecast to occur as early as 2022/23 and be around 11.3Ml/d in deficit by 2040. [2] -Unsustainable water abstraction from river and water courses damage ecosystems and habitats for fish and other aquatic life (DEFRA, 2017). [4] -The UK Government's 25 Year Plan identifies that reducing unsustainable abstraction will support habitat resotration and nature recovery in water courses. Key to achieving this is delivery of large water supply infrastructure like water transfer stations and reservoirs (DEFRA, 2018) [5] -Sucessive studies demonstrate that flooding land for reservoirs presents a significant challenge to biodiversity (e.g. Jones & Bull, 2019) [6] -Reservoirs and dams have the potential to present opportunities for recreational activities to occur such as water sports or leisure walking (e.g. Tekce et al. 2010) [7] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [9]	-Scheme design and site location appraisal -Community engagement and consutation -Planning Application Submission -Construction	-Completed water supply infrastructure	*Short Term* -Enabling growth identified in Local Plans for additional housing and in Oxfordshire Local Industrial Strategy for employment -Additional water supply resilience -Potential for localised biodiversity loss in scheme area (scheme specific) *Medium Term* -Reduced occurance of unsustainable abstractions at water courses in Oxfordshire -Increased resilience to climate change impacts from droughts and other extreme weather events -Potential to support increased recreational activities (Scheme specific) -Reduction in drought orders issued	-Potential to build additional resilience for future growth identified in OP2050 -Potential to support habitat restoration in watercourses as a result of reducing unsustainable abstractions (scheme specific)	-Positive contribution to Oxfordshire's GVA. -Potential to support mental health and wellbeing if scheme includes recreational opportunities (scheme-specific) -Supports long term delivery of key local services e.g. healthcare, education -Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF13A: Oxfordshire Fire & Rescue Infrastructure (e.g. Fire Stations)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Local Plans and IDPs (e.g. West Oxfordshire, 2020) identify that this additional population will place additional demand on emergency services [1] [2] -Considering Oxfordshire's rural areas of woodland and moorland, there is an increased risk from wildfires due to climate change and the increase in occurance of drought. OFRS are also required to respond to extreme weather events such as floods (Oxfordshire Fire & Rescue, 2017). [3] -OFRS provide community outreach support to educate young people about the principles of fire safety (Oxfordshire Fire & Rescue, 2017). [3] -OFRS undertake safer & wellbeing visits to vulnerable homes across Oxfordshire by targetting those most at risk groups to prevent deaths and injuries in the home. These visits also positively reduce wider safety risk factors at home as a result of domestic abuse, exploitation, radicalisation and hate crime. (Oxfordshire Fire & Rescue, 2017). [3] -The OFRS aim to arrive at 80% of emergencies within 11 minutes and 95% of emergencies in 14 minutes or less (Oxfordshire Fire & Rescue, 2017). The annual monitoring report (OFRS, 2020) identifies that this target is not being met in West Oxfordshire with 78% of emergencies responded to in 11 minutes or less [3]. Response rates in Oxford are the highest. [4] -Fires have a devestating consequence for businesses and the local economy - a large proportion of businesses that suffer a signifiant fire never fully recover and either close or relocate to another area ((Oxfordshire Fire & Rescue, 2017). [3] -As part of its 365alive vision, the OFRS has an aim to keep 6,000 people alive as part of their prevention, protection and emergency response activities by 2022 (Oxfordshire Fire & Rescue, 2017). [3] -OFRS regularly assist the NHS Ambulance Trust by providing co-responder services to medical emergencies (Oxfordshire Fire & Rescue, 2017). [3] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [5]	-Scheme design -Community engagement and consutation -Planning Application Submission -Construction	-Completed fire station	*Short Term* -Enabling growth identified in Local Plans for additional housing and employment growth identified in Oxfordshire Local Industrial Strategy -Potential for improved emergency response times for fire tenders in the local area (scheme and location specific) *Medium Term* -Increased opportunities for localised community outreach support to vulnerable people at home to reduce risk of serious injury and death -Reduced impact the economic costs of fire and other dangers to the Oxfordshire economy. -Promote enhanced local community wellbeing	-Potential to build additional resilience for future growth in OP2050 -Increased service resilience to respond to extreme weather events as a result of climate change	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF13B: Thames Valley Police Infrastructure (e.g. Police Stations)

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Local Plans and IDPs (e.g. West Oxfordshire, 2020) identify that this additional population will place additional demand on emergency services [1] [2] -Nationally, mental-health related incidents account for around 40% of police time and there is a current TVP scheme to enhance its triage scheme involving the deployment of a mental health practioner to help those struggling with mental health problems rather than using police custody (Thames Valley Police 2017) [3] -The impact of crime on victims has a significant societal impact - this includes lost productivty in the workplace as a result of both physical and emotional harm as well as a detoritation in mental health and wellbeing (UK Government, 2019) [4] -Crime has a significant detrimental economic impact. In 2015/16, the estimated cost of total crime in the UK was £50.1 billion (UK Government, 2019) [4] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [5]	-Scheme design -Community engagement and consutation -Planning Application Submission -Construction	-Completed police station	*Short Term* -Enabling growth identified in Local Plans for additional housing -Potential for improved emergency response times for police vehicles in the local area (scheme and scale specific) *Medium Term* -Potential for reduced crime incidence and improved perception of community safety -Reduced impact the economic costs of crime to the Oxfordshire economy -Improved local community mental health	-Potential to build additional resilience for future growth identified in OP2050 -Increased Oxfordshire economic output	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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IF13C: NHS South Central Ambulance Trust Depots

Context	Input	Output	Outcomes (Short & Medium Term)	Long Term Impacts (Direct)	Long Term Impacts (Indirect)
-Policy need to deliver housing growth in District Local Plans as part of Oxfordshire Housing & Growth Deal (100,000 homes). District Local Plans and IDPs (e.g. West Oxfordshire, 2020) identify that this additional population will place additional demand on emergency services [1] [2] -NHS England sets out national standards for ambulance response times - all ambulance trusts must respond to Category 1 calls in 7 minutes on average and respond to 90% of Category 1 calls in 15 minutes (NHS England, 2018) [3] [4] -UK Government (MHCLG, 2017) policy is that construction of additional housing can improve housing affordability [5]	-Scheme design -Community engagement and consutation -Planning Application Submission -Construction	-Completed ambulance depot	-Enabling growth identified in Local Plans for additional housing and employment identified in Oxfordshire Local Industrial Strategy -Potential for reduced emergency response times for ambulance vehicles in the local area	-Potential to build additional resilience for future growth identified in OP2050 -Increased Oxfordshire economic output	-Additional housing has the potential to improve housing affordability and retain talent in Oxfordshire

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[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692093/Oxfordshire_Housing_and_Growth_Deal_-_Outline_Agreement.pdf [Accessed 23/04/21]
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