6 OxIS Infrastructure Scheme Identification and Gaps

Chapter at a Glance

This Chapter identifies the methodology for the identification of OxIS infrastructure schemes (Step 1) for subsequent multi-criteria appraisal (see Chapter 7). This includes a consideration of the sources of infrastructure schemes, alongside the sifting (Step 2), grouping (Step 3) and filtering (Step 4) processes. The latter section of the chapter identifies strategic gaps where there is an absence or lack of tangible infrastructure schemes to address Oxfordshire's future needs to 2040 identified in Chapter 5.

6.1 Process and Purpose

The identification of schemes for OxIS Stage 1 to 2040 has followed an objective process. This has considered a wide breadth of sources and infrastructure types to reflect the Future Oxfordshire Partnership's (formerly the Oxfordshire Growth Board's) strategic ambitions: to achieve growth in a sustainable, clean, healthy and inclusive way aligned to the five OxIS Themes. Schemes have therefore been considered which are required to deliver growth aspirations identified in the various District Local Plans (see Chapter 3) in parallel to those which fulfil Oxfordshire County's future needs to 2040 (see Chapter 5).

The process, which has been developed in partnership with the OxIS Working Group and key strategic partners, seeks to establish a consensus between Districts across the County on strategic infrastructure schemes which support opportunities to facilitate strategic funding. It also seeks to support, but not replicate each District's Infrastructure Delivery Plan (IDP).

It is recognised that there is no clear existing definition identified within national or local guidance over what makes infrastructure *'strategic.'* Within OxIS a broad definition has been applied which recognises key stakeholder's views to capture not only schemes with a significant geographical spatial impact or capital cost but also smaller schemes with a more local spatial impact which remain strategically critical to the creation of successful places.

For inclusion as a strategic infrastructure scheme within OxIS, all identified schemes have been subject to a four step sifting, grouping and filtering process to apply a set of criteria to qualify infrastructure (see Figure 6-1).
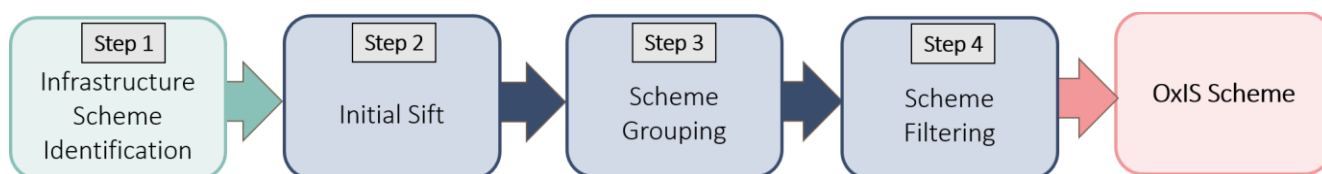

Figure 6-1: OxIS Scheme Identification Process

The schemes have also been divided into 13 infrastructure types (see Figure 6-2)

IF1: Energy (see Section 4.2)	**IF6: Innovation** (see Section 4.7)	**IF10: Health & Adult Social Care** (see Section 4.11)
IF2: Transport (see Section 4.3)	**IF7: Green & Blue** (see Section 4.8)	**IF11: Waste & Recycling** (see Section 4.12)
IF3: Flood Alleviation (see Section 4.4)	**IF8: Community & Cultural** (see Section 4.9)	**IF12: Potable Water Supply & Wastewater** (see Section 4.13)
IF4: Education (see Section 4.5)	**IF9: Sport & Leisure** (see Section 4.10)	**IF13: Emergency Services** (see Section 4.14)
IF5: Digital (see Section 4.6)		

Figure 6-2: Infrastructure Types

The identification of schemes has followed an objective process, primarily based on their grounding in established policy or strategy documents impacting the county. It should be noted that this review is based on a snapshot of schemes predominately identified in Spring 2021, with some additional schemes post-public

consultation, which means that the OxIS schemes considered do not fully address all the county's needs to 2040.

The key challenges for scheme identification include:

- **Climate Emergency:** Many of the policy or strategy documents pre-date the declaration of a climate emergency in Oxfordshire in 2019 and therefore do not yet reflect schemes required to achieve the Future Oxfordshire Partnership's (formerly Oxfordshire Growth Board's) ambitious net zero targets by 2040 or earlier
- **COVID-19 Uncertainty:** It is not yet clear what the long term impact of the COVID-19 crisis will be and its impact on future needs and the type of future infrastructure required, particularly in relation to transport and green infrastructure
- **Future Round of Local Plans:** the future strategy and location of growth beyond the currently adopted Local Plan periods is emerging and will be an iterative process. Stage 1 of OxIS helps to secure the delivery of infrastructure from committed Growth as well as providing a framework to support planning for and securing infrastructure to 2040.
- **Insufficient Scheme Detail:** Each of the key sectors adopt different approaches to the identification of future scheme requirements, for example due to various statutory processes (e.g. education) and where schemes require notable partnership working (e.g. consolidated community and emergency services facilities). In these cases, there is a greater level of uncertainty relating to the detail of these future schemes which means that their appraisal is not possible at this point in time

The strategic OxIS scheme gaps are discussed in further detail in Section 6.5. There is an opportunity through OxIS Stage 2 and through and future updates of OxIS to consider any additional proposed scheme, including those identified as helping to address identified scheme gaps.

6.2   Long List Scheme Identification (Step 1)

The identification of the long list of infrastructure schemes (for OxIS Stage 1 to 2040 and where possible OxIS Stage 2 to 2050) has followed an objective process which has been primarily based on their grounding in established policy or strategy documents and subsequently verified through targeted engagement with key stakeholders.

As indicated in Table 6-1, the range of policy and strategy documents reviewed includes Districts' IDPs and Infrastructure Funding Statements alongside wider sources including the Oxfordshire Investment Plan, Thames Water Resources Management Plan and the OCCG Estates Strategy. All adopted IDPs from neighbouring planning authorities have also been considered in relation to any notable schemes which may directly impact on Oxfordshire.

Author / Originator	Document	Date	Status
Cherwell District Council	Cherwell Infrastructure Delivery Plan	2020	Adopted
	Cherwell Local Plan Partial Review – Appendix 4	2020	Adopted
England's Economic Heartland	Connecting People, Transforming Journeys: Regional Transport Strategy	2021	Final
National Highways	Road Investment Strategy 2	2020	Final
Oxford City	Oxford City Infrastructure Delivery Plan	Pending	Pending
OCCG	Primary Healthcare Estates Strategy	2021	Final
OCC	Oxford Local Cycling & Walking Infrastructure Plan	2020	Adopted
	Bicester Local Cycling & Walking Infrastructure Plan	2020	Emerging
	Oxfordshire Local Transport Plan 2015 – 2031 (LTP4)	2015	Adopted
	Oxfordshire Bus Service Improvement Plan	2021	Adopted
	Oxfordshire Local Transport & Connectivity Plan	2022	Emerging
Future Oxfordshire Partnership, Network Rail & strategic partners	Oxfordshire Rail Corridor Study	2021	Endorsed
OxLEP	Oxfordshire Investment Plan	2020	Final

Author / Originator	Document	Date	Status
Reading Borough Council	Reading Infrastructure Delivery Plan	2018	Adopted
Scotia / Scottish / Southern Gas Networks	Long Term Development Statement 2020	2020	Final
South Oxfordshire District Council	South Oxfordshire Infrastructure Delivery Plan	2020	Adopted
	Didcot Garden Town Delivery Plan	2019	Adopted
Southern Electric Power Distribution	Long Term Development Statement for Southern Electric Power Distribution PLC's Electricity Distribution System	2020	Final
Thames Water	Thames Water Resources Management Plan	2019	Final
Vale of White Horse District Council	Vale of White Horse Infrastructure Delivery Plan Part 1	2016	Adopted
	Vale of White Horse Infrastructure Delivery Plan Part 2	2018	Adopted
West Oxfordshire District Council	West Oxfordshire Infrastructure Delivery Plan	2015	Adopted
	West Oxfordshire Infrastructure Funding Statement	2020	Adopted
Western Power Distribution	Long Term Development Statement – West Midlands	2020	Final

Table 6-1: Summary of Key Long List Scheme Sources

Context of Scheme Identification & Sources

It should be noted that this process considers infrastructure schemes that are already proposed in established sources by key stakeholders across the county, rather than the devisal of new proposals. As a result, some of the schemes included within this Stage 1 Report predate significant policy shifts that have since occurred across the county (e.g. in relation to net zero carbon targets & Oxfordshire's Strategic Vision).

The scheme identification process additionally does not capture schemes identified in emerging sources that are not yet published or adopted by Oxfordshire's Local Authorities. This includes emerging documents such as the Local Transport and Connectivity Plan alongside other sources such as Leisure and Play Pitch strategies currently in preparation by various District Councils. There is an opportunity through future iterations of OxIS to capture any schemes that may emerge from these sources.

To provide updates on the identified schemes' detail, cost estimates, delivery status, and funding status, input from key discipline-specific stakeholders to the initial long list of schemes was sought. Alongside those already listed in Table 6-1, this included the external stakeholders such as the Environment Agency, Wales & West Utilities, Oxfordshire Fire & Rescue and Thames Valley Police.

6.3   Scheme Sifting, Grouping & Filtering (Steps 2, 3 & 4)

The long list of schemes was subject to an objective sifting, grouping and filtering process to identify OxIS strategic infrastructure schemes (see Table 6-2).

Step	Purpose	Schemes
Step 1: Infrastructure Scheme Identification	See Section 6.2	1,204
Step 2: Initial Sift	• Remove schemes already delivered or at an advanced delivery stage • Remove schemes that do not require capital funding	325
Step 3: Grouping	To group smaller schemes progressed through Step 2 of the same category and within the same OxIS town or rural community with an estimated value of less than £500,000.	31
Step 4: Filtering	To filter out non-strategic schemes based on an established set of criteria.	271

Table 6-2: Summary of Scheme Sifting, Grouping & Filtering Process

Strategic Nature of OxIS Schemes and Filtering Purpose

The strategic nature of OxIS means that it is not appropriate to duplicate IDPs by appraising an exhaustive list of all infrastructure identified by each Oxfordshire District required to support future development. The filtering method applied with objective criteria provides a framework by which infrastructure of a strategic nature can be identified.

6.3.1   Scheme Sifting (Step 2)

As shown in the flowchart for the initial sifting process (see Figure 6-3), was to sift out schemes which did not clearly qualify for capital funding. This process discounted schemes already delivered, currently under construction or at an advanced delivery stage (e.g. with planning approval or with full capital funding already assigned). This includes schemes such as the Oxford Flood Alleviation Scheme (see Section 4.4) which are already at an advanced delivery stage.

Schemes already established in adopted Local Plans as an intrinsic requirement for the delivery of development sites by developers through the planning process (e.g. biodiversity net gain, highway mitigation, internal community centres) were also discounted.

The outcome of this process resulted in reducing from 1,204 schemes to 325 progressing to Step 3.
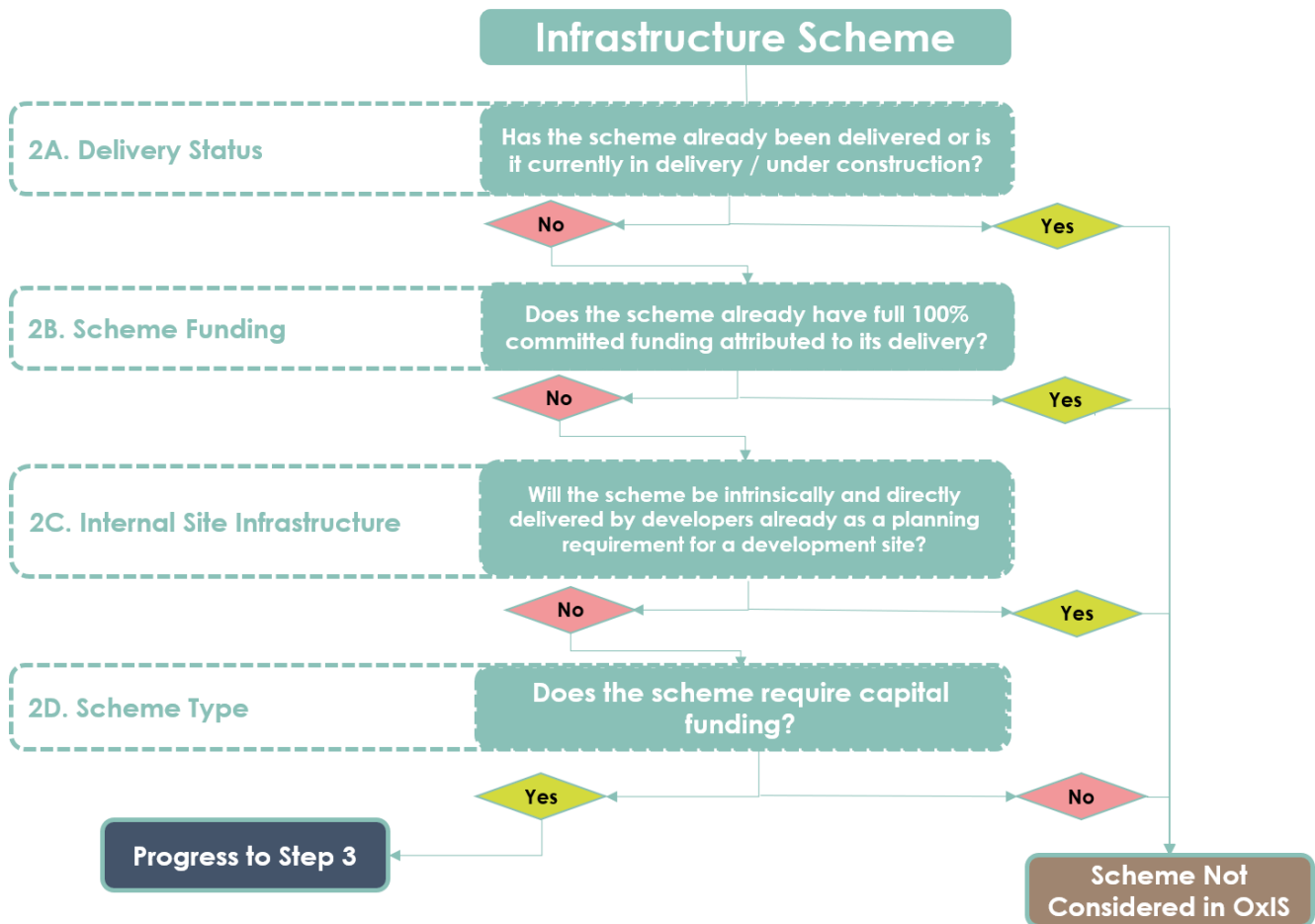

Figure 6-3: Step 2 Scheme Initial Sifting Process

6.3.2   Scheme Grouping (Step 3)

Following the sifting, the purpose of the grouping process was to combine smaller individual schemes already progressed through Step 2 into collective schemes. This was undertaken to ensure that schemes with a smaller capital cost yet potentially critical to the creation of successful communities were captured.

The filtering process, shown in Figure 6-4, identifies that a maximum funding threshold of £500,000 was initially applied. Schemes were then grouped where there were multiple of the same infrastructure types and within the same OxIS Town or OxIS Rural Community (see Section 2.1.2).
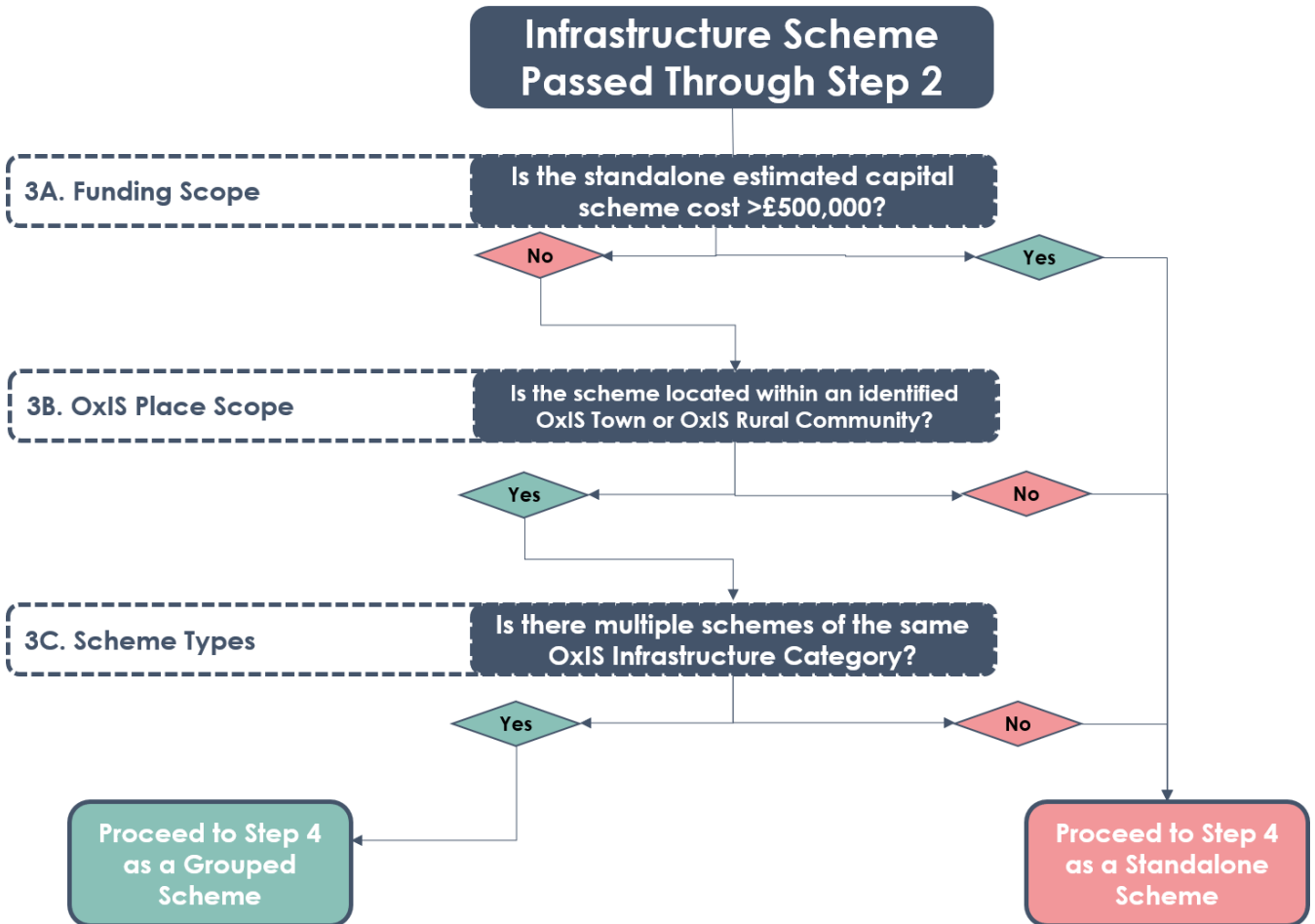

Figure 6-4: Step 3 Scheme Grouping Process

6.3.3   Scheme Filtering (Step 4)

Following sifting and grouping, each of the individual or grouped schemes were then subject to a robust filtering process for them to qualify as an OxIS strategic infrastructure scheme. As there is no established guidance on what constitutes *'strategic infrastructure',* a bespoke flowchart was developed (see Figure 6-5).

The criteria, developed in conjunction with the OxIS Working Group and key external partners, included the application of qualification scope related to geography, partnership working, capital cost and need fulfilment (see Section 5). The flowchart was specifically designed to ensure that smaller schemes with a lower capital cost of less than £500,000, yet potentially still served a strategic place-shaping purpose, had multiple opportunities to qualify.
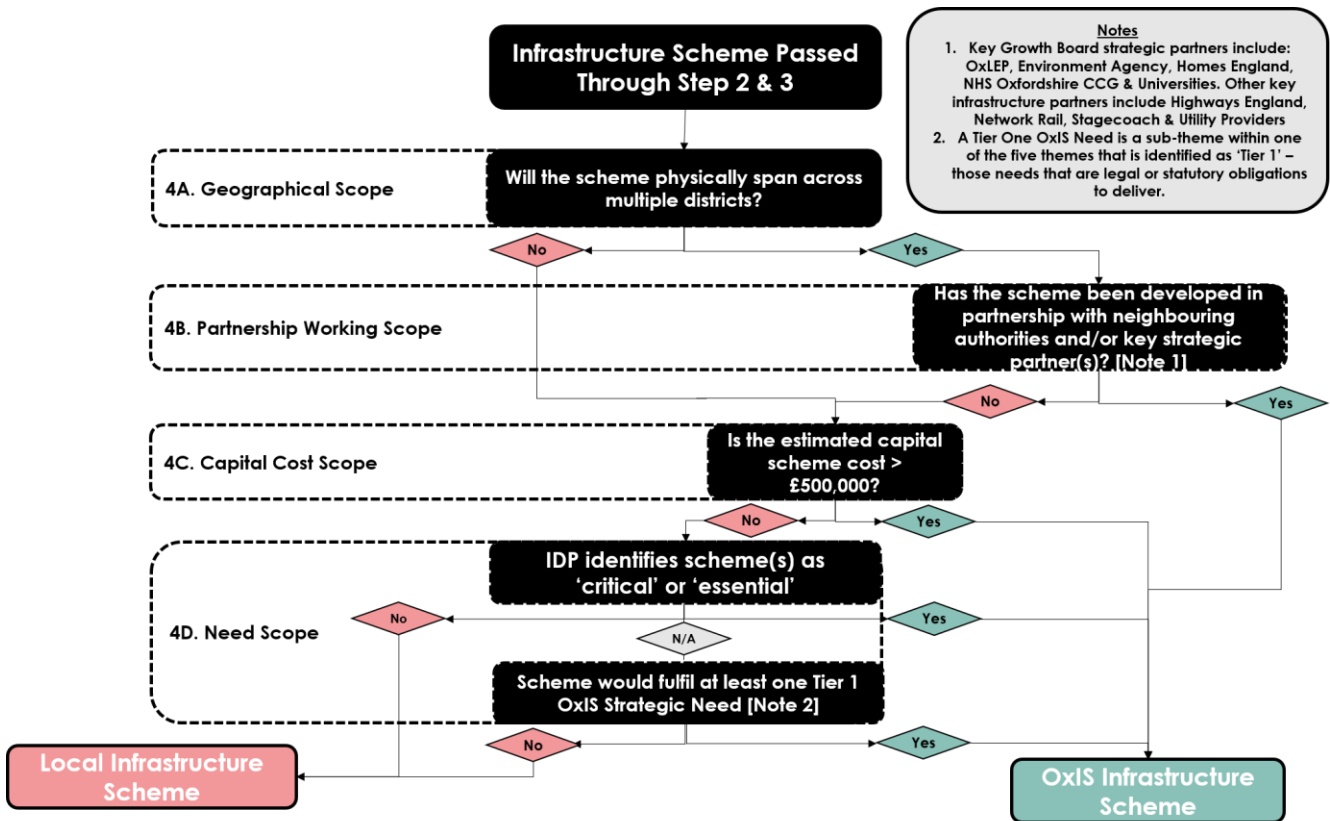

Figure 6-5: Step 4 Filtering Process

6.4   OxIS Schemes

The outcome of the sifting and filtering process resulted in the identification of 271 OxIS schemes. Each of these schemes were then subject to the multi-criteria appraisal and prioritisation process (see Chapter 7).
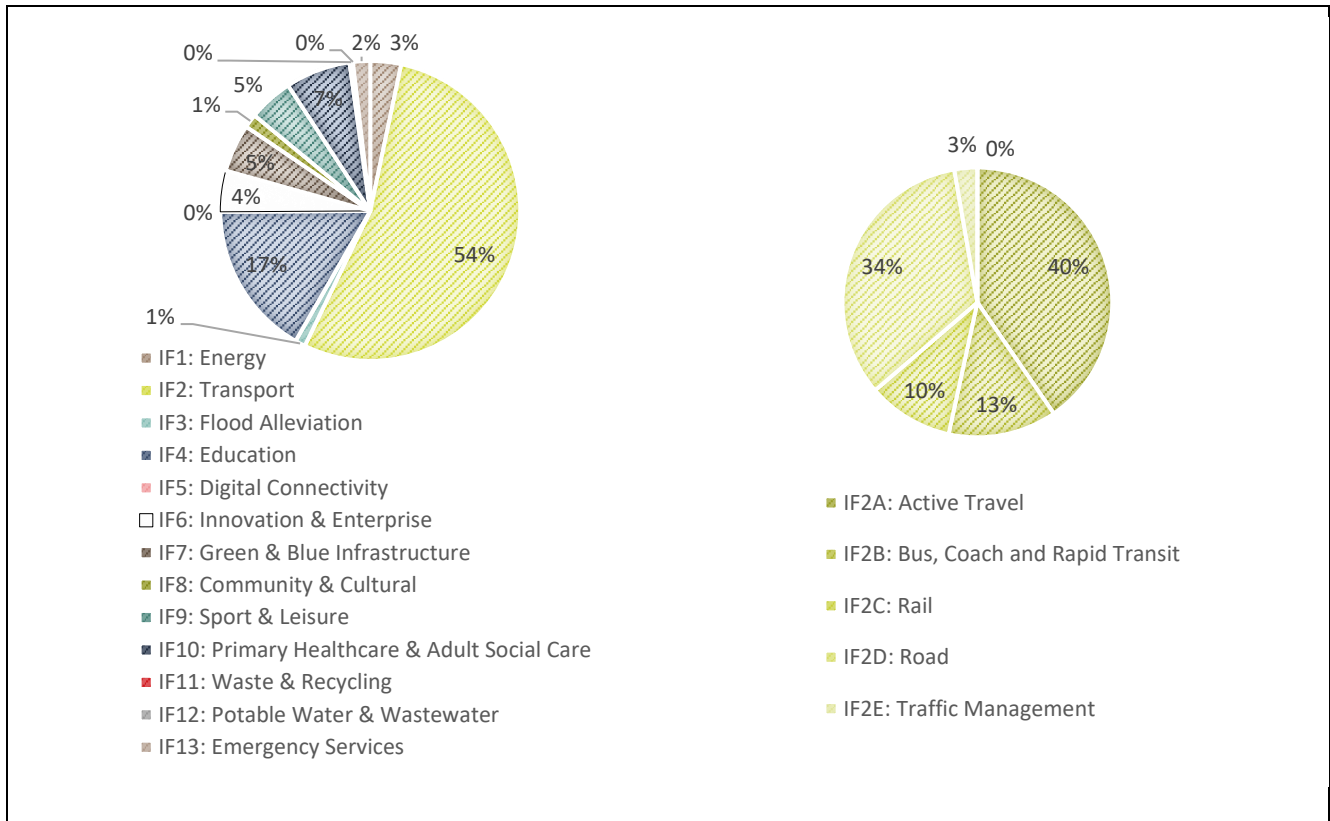

Figure 6-6: Summary of OxIS Schemes by Infrastructure Types

A summary of schemes broken down by category (see Figure 6-6), indicates that approximately 54% of schemes are transport; with the majority of these being active travel. Schemes across the remaining twelve categories are generally evenly distributed; except for Digital (IF5) where no schemes have been identified (see scheme gaps in Section 6.5).

As shown in Figure 6-7 and Table 6-3, around 30% of schemes are of a regional scale; varying from sub-national schemes, county-wide schemes to strategic district-wide schemes. The remaining schemes are local in nature split across the OxIS Towns & Surrounds (approximately 51%) and the OxIS Rural Communities (approximately 21%).

> **Context of OxIS Schemes**
>
> All schemes included in OxIS will be subject to the future appropriate planning and approval processes. Inclusion in OxIS does not represent endorsement of schemes.
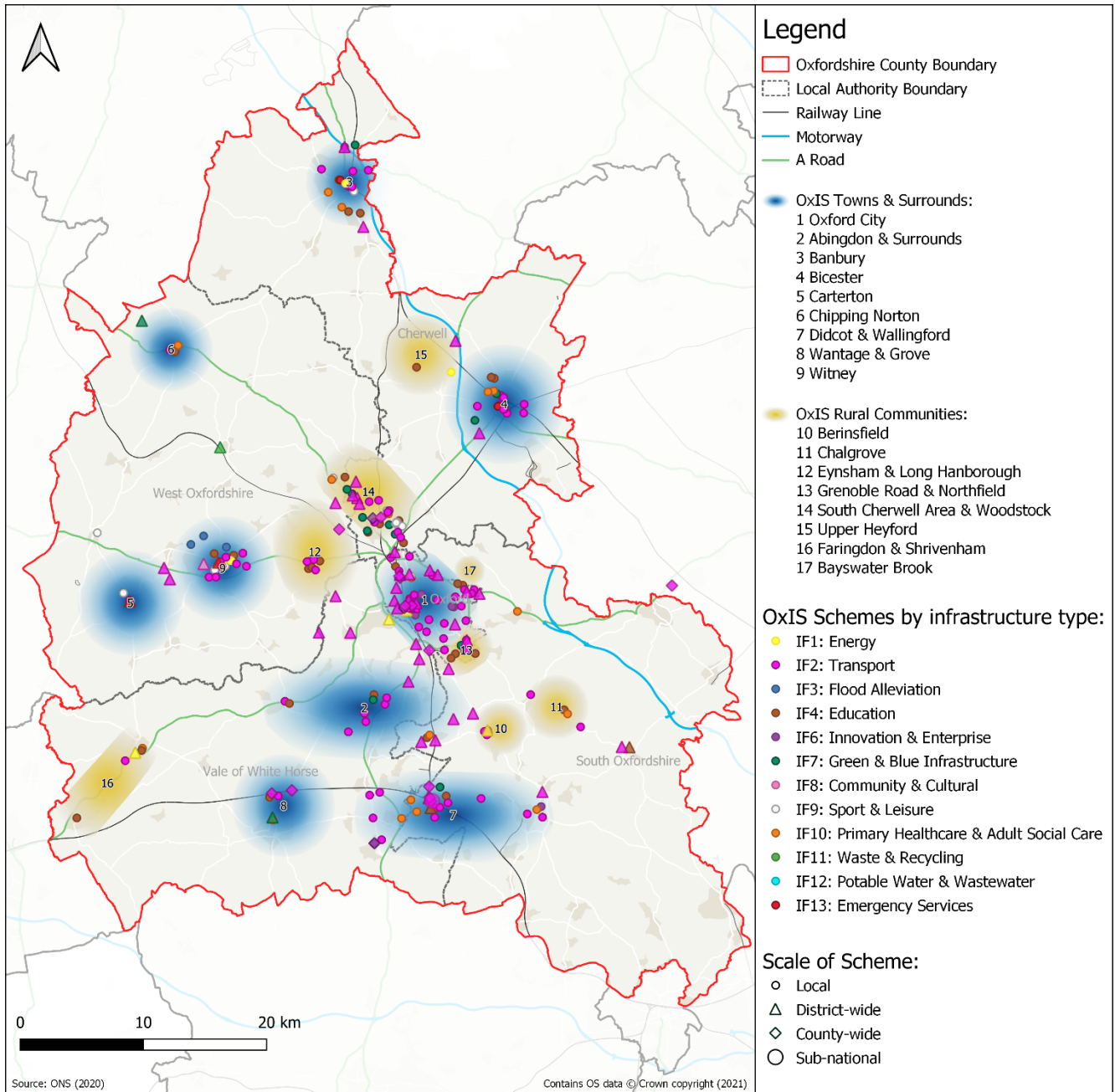
Figure 6-7: OxIS Scheme Locations

Scale	Spatial Impact	Number of Schemes	Percentage of Schemes
Regional	Sub-National	1	0%
	Cross-County	2	0%
	County-Wide	20	7%
	Cross-District	24	9%
	District-Wide	30	11%
Local	OxIS Town & Surround	138	51%
	OxIS Rural Community	56	21%
	TOTAL	271	100%

Table 6-3: Summary of OxIS Scheme Scale

Emerging Schemes Excluded from the Stage 1 Appraisal

The robust needs based multi-criteria appraisal methodology is reliant on schemes having a minimum level of known detail, such as features, strategic aims, location and likely capital cost, to provide a level of consistency in scoring outputs across differing scheme types. The Stage 1 Report has been produced at a specific point in time (Autumn 2021) which means that there is varying level of detail available on scheme specifics.

There are several schemes where this level of detail is not yet known and remain subject to an ongoing optioneering process. This means appraisal of these schemes has not been possible. This includes the following schemes:

- **OAIDP1:** Third Thames Crossing north of Reading
- **C307:** Reconfiguration of primary care services in Bicester Central around the Horton Hospital
- **SO42:** Western Rail Link to Heathrow Airport
- **SO43**: Great Western Railway Modernisation
- **SO85:** Abingdon Southern Bypass
- **SO86:** Southern Didcot Road
- **OC10:** A40 – A40 Strategic Link Road
- **OC55:** GP Surgery to serve Oxford West End and Osney Mead
- **WO90:** East Chipping Norton Link Road

- **EEH1:** Varsity Cycleway (Oxford-Cambridge)
- **SO87:** A4130 Road Corridor Capacity Improvements
- **EA1:** Abingdon Flood Alleviation Scheme
- **EA2:** Thames Valley Flood Alleviation Scheme
- **TWB1:** Southeast Strategic Reservoir
- **TWB2:** Oxford Canal Raw Water Transfer
- **STW1:** Severn to Thames Water Transfer
- **VoWH205:** Wantage Western Relief Road
- **VoWH210:** A417 (Reading Road) Improvement Scheme including Adlington Junction upgrade

Future progression of these schemes have the potential to address some of the strategic gaps subsequently identified in Section 6.6. There is an opportunity through future updates of OxIS to consider these schemes further as more information becomes available.

6.4.1 Regional Schemes
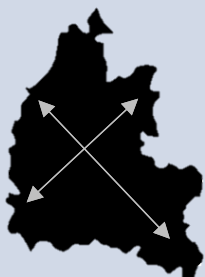
Sub-National Schemes

- **ORC6**: Grade Separation of Didcot East Rail Junction

Cross-County Schemes

- **SO30:** Thame to Haddenham cycle route
- **VoWH106:** Restoration of the Wilts and Berks Canal from Melksham to Swindon, Wantage/Grove and Abingdon

Oxfordshire County-Wide Schemes	
	• **ORC1:** Oxford Station Additional Through Platform & Associated Line Capacity Upgrades
	• **ORC2:** Cowley Branch Line Improvements including two new stations at Oxford Science Park & Oxford Business Park
	• **ORC7**: Didcot Parkway station – additional platform
	• **ORC8**: Didcot Goods Line upgrade & line extension to Milton Junction
	• **ORC9**: Wolvercote Rail Junction – Capacity Upgrades
	• **ORC11**: Hanborough Station additional platform including Cotswolds line capacity upgrades
	• **ORC13**: New Rail Station at Grove
	• **ORC14**: Grove – loop extension and additional crossovers
	• **ORC15**: Oxford North Rail Junction – additional line bypassing junction on Up side
	• **ORC16**: Oxford Canal Rail Junction – crossover between Up and Down Bletchley Lines
	• **ORC17**: New Rail Station at Begbroke
	• **ORC18**: Didcot North Junction – third rail line north of junction
	• **BSIP1**: County-wide traffic signals upgrade to enable bus priority
	• **IHUB9**: MaaSCAV: Smart Traffic lights
	• **IHUB10**: DRIVEN Project: Updating of ATC to live blackcats.
	• **IHUB12**: Endeavour Project: Parking bay sensors
	• **IHUB13**: 5G Heart project: Fibre connectivity to roadside assets
	• **OIP6:** Space AI and Autonomy Lab, Harwell
	• **OIP8:** Locate Oxford Global Innovation Campus
	• **OIP20:** West's End Global Innovation District
Cross-District Schemes	
	• **OC2:** Yarnton Bulk Supply Point Reinforcement
	• **BSIP3:** A34 Bus Priority Scheme Phase 1 - Hinksey Hill A34 Northbound Exit
	• **BSIP4:** Bus priority improvements at Pear Tree Park & Ride junction
	• **C83:** P&R at London Oxford Airport (approx. 1,100 Spaces)
	• **C86:** Junction improvements facilitating cross-corridor bus movements A44 to / from A4260
	• **C87:** Bus priority improvements on the A44 between Langford Lane and Bladon Roundabout
	• **OC24:** Abingdon Road Corridor Improvements
	• **OC26:** Banbury Road & Oxford Road Corridor Improvements
	• **OCCP&R1:** Park & Ride at Cumnor (1,200 Spaces)
	• **OLCWIP1:** Canal Path Walking and Cycling Improvements
	• **OLCWIP3:** Woodstock Road Active Travel Improvements
	• **OLCWIP13:** Barracks Lane and Horspath Active Travel
	• **OLCWIP21:** South Oxford Path Walking and Cycling Improvements
	• **OLCWIP25:** Botley Rd Walking and Cycling Improvements
	• **SO21:** Science Vale Active Travel Network
	• **SO23:** Cycle Connection between Berinsfield/Culham to Oxford via the Roman Road bridleway
	• **SO40:** Strategic Rapid Transit Park and Ride & Bus Priority Improvements on A4074 corridor
	• **SO53:** A40 Link Road through Bayswater Brook from the A40 at Marsh Lane interchange to east of Sandhills
	• **SO69:** New and upgraded cycling connections to Oxford, Berinsfield & Watlington via B480 and Burcot Lane / Dorchester Road / Stadhampton Road
	• **SO74:** B480 Gateway Scheme including cycle lane improvements and bus priority measures
	• **SO75:** Pedestrian and Cycle Bridge over A40 Northern Bypass
	• **VoWH22:** A34 Bus Priority Phase 2 - bus lane between Lodge Hill-Hinksey Hill & Lodge Hill Park and Ride
	• **WO55**: Cycle Route from Eynsham - Oxford on B4044
	• **OCCE1:** New SEN School serving southern Oxfordshire

Cherwell -Wide Schemes	• **C69**: Improvements to A41 gateway corridor to Bicester including bus priority measures • **C125**: M40 Junction 10 Capacity Improvements • **C131**: Access to Banbury North (New M40 Slips)
Oxford City-Wide Schemes	• **OC1**: Uprating of a section of the 132kV cable at Osney Lane Bulk Supply Point • **OC4**: Cycle Hire Stations • **OC6**: Emergency Active Travel Schemes • **OC39**: Zero Emission Zone (Phase II) • **OC40**: Controlled Parking Zones (city-wide) • **OCCP&R2**: Park & Ride Extension at Thornhill (465 Spaces) • **OLCWIP28**: Oxford Ring Road Active Travel Improvements • **OLCWIP31**: Low Traffic Neighbourhoods • **OLCWIP32**: Signing and parking Active Travel Improvements
South Oxfordshire-Wide Schemes	• **SO20**: Retrofitting to install Air Source Heat Pumps and Solar PV cells at South Oxfordshire Council Leisure Centres • **SO24**: Improvements to cycle routes to rail stations • **SO26**: Benson to Wallingford cycle route minor improvements • **SO45**: Culham Railway Station Enhancements • **SO48**: A4074 Golden Balls Roundabout Improvement and B4015 Widening • **SO119**: Expansion of secondary school capacity by 2fe, potentially at Icknield Community College
Vale of White Horse-Wide Schemes	• **VoWH19**: Retrofitting to install Air Source Heat Pumps and Solar PV cells at Vale of White Horse Council Leisure Centres • **VoWH59**: A34 Lodge Hill Interchange Upgrade including South Facing Slips
West Oxfordshire-Wide Schemes	• **WO37**: Bablock Hythe crossing of River Thames • **WO52**: Witney to Carterton cycleway • **WO57**: Footpath / cycleway connecting Hanborough through Bladon to Woodstock • **WO84**: Improve access by road to Carterton including upgrade of B4477 and West facing slips at A40/B4477 • **WO144**: Evenlode Green Ribbon & Catchment Schemes including habitat restoration • **WO161**: Enhanced Library Provision at Witney, Carterton, Chipping Norton, Eynsham and Woodstock • **WO180**: New waste transfer station • **WO187**: New one pump 2 bay fire station in Carterton • **WO188**: Various Thames Valley Police schemes including adaptation of Witney, Carterton, and Woodstock Police Stations • **WO189**: 2-3 ambulance standby points in the District including ambulances

6.4.2   Local Schemes: OxIS Towns & Surrounds

1. Oxford City Local Schemes

- **OC3**: New substation required to support the Diamond Place regeneration
- **BSIP2**: Barton Waynflete Road Link (One Way Bus Only Road)
- **BSIP6**: Horspath Driftway bus priority scheme
- **OC8**: Broad Street Part Pedestrianisation and Public Realm Improvements
- **OC25**: B4495 Corridor Improvements B4495 Corridor Improvements (Hollow Way/ Between Towns Road/ Donnington Bridge)
- **OC28**: Iffley Road Corridor Improvements
- **OC29**: Cowley Road/ Garsington Road/ Watlington Road Corridor Improvements
- **OC31**: Eastern Bypass corridor improvements / A3133 Kennington to Cowley Bus Priority Improvement Scheme
- **OC32**: Northern Bypass corridor improvements between Cutteslowe Roundabout to Mash Lane including bus lanes
- **OC36**: Traffic Filters and Supporting Measures
- **OCCTA1**: A40 Crossing at Collinwood Road
- **OLCWIP2**: Walton Street Active Travel Improvements
- **OLCWIP5**: North Oxford Path
- **OLCWIP6**: Marston Active Travel Improvements
- **OLCWIP8**: Northway & Barton Active Travel Improvements
- **OLCWIP9**: Headington Path
- **OLCWIP10**: Headington Active Travel Improvements
- **OLCWIP12**: Old Road Active Travel Improvement
- **OLCWIP15**: Blackbird Leys Active Travel Improvements
- **OLCWIP16**: Littlemore Active Travel Improvements
- **OLCWIP18**: Rose Hill Active Travel Improvements
- **OLCWIP29**: City Centre Active Travel Improvements
- **OLCWIP30**: Jackdaw River Bridge
- **OXG1:** Oxford Smaller Scale Active Travel Schemes
- **OC44**: Extensions to primary schools equivalent to 0.5FE, to cater for Oxford North and cumulative sites
- **OC55:** 0.5FE Expansion to Barton Park Primary School
- **OIP1**: The Energy Systems Accelerator
- **OIP2**: Clinical Biomanufacturing Facility
- **OIP3**: BioEscalator 2 (Global Health & Life Sciences Cluster)
- **OIP7**: Oxford – Singapore AI and Human-Machine Collaboration Institute
- **OIP21**: Creative and Cultural Industries Hub
- **OC49**: Blackbird Leys Regeneration New Community Hub
- **OC56:** Refurbishment and extension of Ferry Leisure Centre
- **OC51:** New Health Centre in Diamond Place, Summertown

2. Abingdon & Surrounds

- **VoWH50**: Marcham Bypass and Frilford Junction
- **VOWH52**: Shippon & Abingdon Pedestrian and Cycle Bridge
- **VOWH53**: Barrow Road / unnamed road (to Gozzards Ford) junction upgrade
- **VOWH54**: Unnamed road (to Gozzards Ford)/A415 junction upgrade
- **VOWH55**: Long Tow/Wootton Road junction upgrade
- **VOWH56**: A415/A420 link road
- **VoWH70**: Two form-entry primary school at Dalton Barracks
- **VoWH71**: One form entry primary school, East of Kingston Bagpuize
- **VoWH83**: Dalton Barracks Parkland
- **VoWH186**: New GP Surgery in Abingdon
- **SO107**: Two Two Form Entry primary schools at Culham (including early years)
- **SO108**: 900 place secondary school at
- **SO210**: New GP surgery at Culham

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3. Banbury

- **C9**: 300m of expansion and realignment in the gas infrastructure around Banbury
- **C72**: Rejuvenating or relocating Banbury Bus Station
- **C96**: Re-designing Banbury Station forecourt to improve multi-modal interchange
- **C112**: Car parking routeing and guidance system
- **C114**: Improving capacity & bus priority of Cherwell Street/ A4620 Windsor Street corridor **C117**: East-west strategic movements: Hennef Way corridor A422 Improvements
- **C118**: East-west strategic movements: Warwick Road Corridor Improvements

- **C120**: Review of Banbury Town Centre traffic circulation
- **C132**: Banbury South East Link Road east of M40 J11
- **C151**: 2FE primary school - South of Salt Way
- **C152**: Expansion of Longford Park Primary School from 1.5FE to 2FE
- **C168**: New secondary school provision in Banbury
- **C182**: Banbury Country Park Improvements
- **C282**: Relocation of Banbury United Football Club
- **C305**: Additional GP provision in North Banbury
- **C306**: Additional GP provision in South Banbury
- **C339**: Relocation of Banbury Fire Station

4. Bicester

- **C1**: CHP and use of heat from Ardley Energy Recovery Facility
- **C16**: Market Square Walking and Cycling Improvements
- **C17**: Banbury Road walking and cycling improvements
- **C18**: Buckingham Road walking and cycling improvements
- **C100**: London Road level crossing - solution for closure
- **C102**: Bicester Eastern Corridor highway capacity improvements
- **C103**: Charbridge Lane Additional Capacity of new bridge to Gavray Drive
- **C104**: Bicester south east perimeter road
- **C109**: Bicester A4905 Realignment Scheme
- **C126**: Central corridor: Kings End and Queens Avenue through to Field Street.

- CG1: Bicester Active Travel Package
- **C144**: Primary School 2 FE (NW Eco Town)
- **C145**: Primary School 2 FE (NW Eco Town)
- **C146**: Primary School 2 FE (NW Eco Town)
- **C147**: Gagle Brook Primary School Phase 2 (1 FE)
- **C166**: New secondary school provision in North West Bicester including shared use cultural facilities
- **C178**: Community Woodland (43ha) – Chesterton (Burnehyll Community Woodland)
- **C218**: Improving blue and green infrastructure in multiple green spaces in Bicester including Bure Park & Langford Brook Park
- **C304**: New GP Surgery to serve South Bicester
- **C338**: Relocation of Bicester Fire Station
- **C347**: New GP premises to serve North West Bicester

5. Carterton

- **WOG2**: Carterton Active Travel Improvement Scheme Package
- **WO118**: Expansion of Carterton Community College
- **WO169**: Provision of ATP plus potential additional changing facilities, Burford

- **WO172**: Additional outdoor playing pitch provision and changing facilities, Carterton
- **WO175**: Enhanced community use, changing and reception areas at Carterton Community College Sports Hall and ATP

6. Chipping Norton

- **WO85**: Remove Primary Route Status from A44 and implement weight restrictions in town centre

- **WO108**: 2FE Primary school (including nursery), East of Chipping Norton
- **WO191**: Expansion of Chipping Norton Health Centre

7. Didcot & Wallingford	• **BSIP5:** Benson Lane, Crowmarsh junction bus priority scheme • **SO27:** Didcot Town Cycle Improvements • **SO28:** Garden Line Cycle Improvements • **SO29:** Premium cycle route between Didcot, Crowmarsh Gifford and Wallingford • **SO31:** Didcot Parkway interchange cycling improvements • **SO76:** Central Didcot Corridor improvement Scheme • **SO83:** Didcot Northern Perimeter Road Phase 3 • **SO88:** Town-wide Controlled Parking Zone in Didcot • **VoWH26:** Access improvements to the A4185 at Harwell Campus • **VoWH51:** Milton Heights Pedestrian and Cycle Bridge • **VoWH57:** Steventon Signalised Junction and A4130 Widening (West of Milton Interchange)	• **VoWH58:** Rowstock Roundabout Improvement • **SO120:** One new 8 Form Entry secondary school in Didcot North East • **OIP4:** Gateway to the UK Space Sector, Harwell • **OIP5:** Disruptive Innovation in Space Centre, Harwell • **OIP22:** Facility for Industrial Scale-Up Support, Harwell • **OIP31:** Howbery Park Centre of Excellence in Climate Change • **SO140:** Didcot North East Nature park and Green Infrastructure Corridor • **SO216:** New or expanded GP premises to serve Wallingford • **SO217:** Expansion of Woodlands Medical Centre • **VoWH192:** New GP surgery at Great Western Park in Didcot • **SO259:** New GP Surgery at Valley Park
8. Wantage & Grove	• **VoWH41:** Grove Northern Link Road Missing Link • **VoWH72:** New Primary School serving NW Grove Development	• **VoWH190:** New GP Surgery at Mably Way in Wantage
9. Witney	• **WO5:** 0.5km of improvements to the gas network around Witney • **WO6:** Gas network reinforcement equivalent to 450M x 250mm in Witney • **WO16:** Pedestrian Cycle improvements from Curbridge Road along Thorney Leys to Station Lane employment • **WO58:** East Witney Active Travel Package • **WO78:** Shores Green Slip Roads on A41 • **WO79:** Improvements to Bridge Street and Staple Hall junctions including public realm and traffic management • **WO80:** Improvements to Oxford Hill/Cogges Hill Road/Jubilee Way junction • **WO81:** Re-designating the A4095 via Jubilee Way, Oxford Hill, A40 at Shores Green to Ducklington Lane and Thorney Leys • **WO86:** Provision of additional off street public car parking spaces • **WOG1:** Witney Walking and Cycling Package of Improvements	• **WO94:** Flood storage upstream and downstream of Crawley • **WO98:** West End Link Road flood storage area on the flood plain of the River Windrush • **WO99:** Flood storage upstream of Hailey Road in Witney • **WO106:** 2FE Primary school (including nursery), North Witney • **WO110:** Improvements and capacity increases to existing primary school provision by approximately 1 form entry in Witney and surrounding area • **WO114:** Secondary school additional provision (Either Expansion of Woodgreen School and/or Henry Box School) • **WO119:** New adult learning centre • **WO157:** Witney Arts Centre • **WO171:** Additional outdoor playing pitch provision and changing facilities in Witney • **WO173:** Replacement of Windrush Leisure Centre

6.4.3 Local Schemes: OxIS Rural Communities

10. Berinsfield	• **SO62**: New access on to A4074 from Berinsfield allocation • **SO64**: Berinsfield Roundabout (A4074 / A415) Junction Upgrade • **SO102**: Primary School capacity increases including at least one new school site to serve Berinsfield • **SO168**: Upgrade of Abbey Sports Centre & Library to accommodate new community facilities in a 'community hub' • **SO208**: GP Provision at Berinsfield
11. Chalgrove	• **SO65**: Stadhampton & Chiselhampton Bypass: Associated with Chalgrove connecting with the B480 • **SO66**: Cuxham Bypass connecting with the B480 • **SO106**: Two x 2 Form Entry primary schools at Chalgrove (including early years) • **SO116**: One new consolidated 1,500 place secondary school • **SO209**: New GP surgery in the Chalgrove area
12. Eynsham & Long Hanborough	• **WO59**: Cycle Route between Eynsham and Hanborough Station and other bridleway upgrades • **WO60**: Saltcross Garden Village crossings over A40 • **WO105**: New 1.5FE Primary School, West Eynsham (including nursery) • **WO107**: Up to 2 x 2FE Primary schools (including nursery), to serve Saltcross Garden Village • **WO116**: New secondary school or split-site expansion of Bartholomew School • **WOG3**: Eynsham Active Travel Improvement Package
13. Grenoble Road & Northfield	• **S109**: One new 3-form-entry primary school at Grenoble Road. • **SO112**: Three Form Entry Primary School at Northfield (including early years) • **SO117**: A 1,500 place secondary school at Grenoble Road
14. South Cherwell area & Woodstock	• **C41**: Pedestrianisation of part of Kidlington High Street • **C47**: Public realm improvements on the A4260 between Benmead Road & Yarnton Road • **C50**: Sandy Lane – pedestrian and cycle new link over railway • **C58**: Upgrade existing footbridge over the railway linking to Northern Gateway • **C62**: Cycle and pedestrian improvements along Langford Lane • **C84**: Bus priority and bus stop improvements along the A4260 / A4165 • **C89**: Expansion of Oxford Parkway P&R (approx. 1,000 spaces) • **C160**: Primary School 2FE at Land East of Oxford Road • **C161**: Additional permanent accommodation at Edward Field Primary School • **C162**: Primary School 3FE at Land East of the A44 • **C163**: Primary School 2FE at Land East of the A44 • **C164**: Enhancements to William Fletcher Primary School including additional playing field land and expansion by 0.5 FE • **C165**: Secondary school (1100- place) at Land East of the A44 • **C216**: Measures for the protection and enhancement of the Oxford Canal corridor and towpath including habitat restoration • **C231**: Nature conservation area incorporating community orchard and with potential to link to and extend Stratfield Brake DWS • **C234**: Nature conservation area on land to the east of the railway line and north of Sandy Lane • **C235**: Local Nature Reserve at Land West of Yarnton • **C236**: Community woodland on land to the north west of PR9 developable area and to the east of Dolton Lane • **C250**: Local Nature Reserve based on Rowel Brook at Land East of the A44 • **C251**: Local Nature Reserve on Frogwelldown Lane • **C275**: Development of leisure provision at Kidlington Leisure Centre, including focus on additional learner pool provision • **C291**: Converting existing Hockey AGP at Kidlington and Gosford Leisure Centre to 3G • **C292**: Formal sport pitches provision at Land South East of Kidlington • **C293**: Sports hall at new Secondary School for shared community use

	C294: Additional swimming pool space by replacement pool of 25m x 6 lane pool plus teaching pool at Kidlington and Gosford Leisure Centre **C311**: New or expanded GP premises in Kidlington area **WO113**: Capacity increases at existing primary schools in Woodstock, Eynsham, Enstone and Stanton Harcourt / Sutton **WO117**: Extensions to Marlborough School, Woodstock **WO167**: Outdoor floodlit training area and/or ATP, Woodstock **WO176**: Relocation of GP practices in Woodstock
15. Upper Heyford	**C159**: Expansion of Heyford Park School plus equivalent of a new 1 - 1.5 FE primary school
16. Faringdon & Shrivenham	**VoWH25**: Signalised Junction Improvements at the A420 / Coxwell Road Junction **VoWH74**: New Primary School facilities on Land south of Park Road, Faringdon **VoWH75**: 1FE primary school at North Shrivenham **VoWH187:** Expansion of Faringdon GP Surgery
17. Bayswater Brook	**SO111**: New 1.5 FE Primary School at Bayswater Brook site (including early years) **SO214**: Expansion / reconfiguration of Morland House Surgery

6.5 OxIS Scheme Gaps – Infrastructure Providers

The OxIS Stage 1 scheme list has some outstanding gaps associated with infrastructure that is the responsibility of key external infrastructure providers and utility providers including commercial digital infrastructure companies as well as the Environment Agency, Thames Water and SSEN. Extensive engagement with these stakeholders has been undertaken through the Stage 1 process, however, limited information has been provided on schemes that remain reliant on funding; some of which is a result of commercial sensitivities. This means that there is presently a lack of some of these related schemes considered within OxIS Stage 1.

6.6 OxIS Scheme Gaps – Unmet Needs to 2040

As shown in Figure 6-8, a key finding of this work is that the identified OxIS schemes do not fully address Oxfordshire's needs to 2040 (see Chapter 5). These gaps are amplified by the challenge in engagement with infrastructure providers as well as policy and societal changes since District IDPs were prepared.

For example, there remains key strategic gaps associated with:

- The OxIS Environment theme; particularly a lack of schemes which directly address Oxfordshire's climate emergency and the need to fulfil the ambition to achieve net zero by 2040 (see Section 6.6.1)

- The OxIS Health theme regarding primary health and social care schemes, alongside green space schemes intended to address health inequalities and enhance people's mental health and wellbeing (see Section 6.6.2)

- The OxIS Connectivity theme, particularly the absence of any digital infrastructure schemes and to support transport connectivity, in advance of OCC's upcoming publication of the Local Transport & Connectivity Plan (see Section 6.6.5)
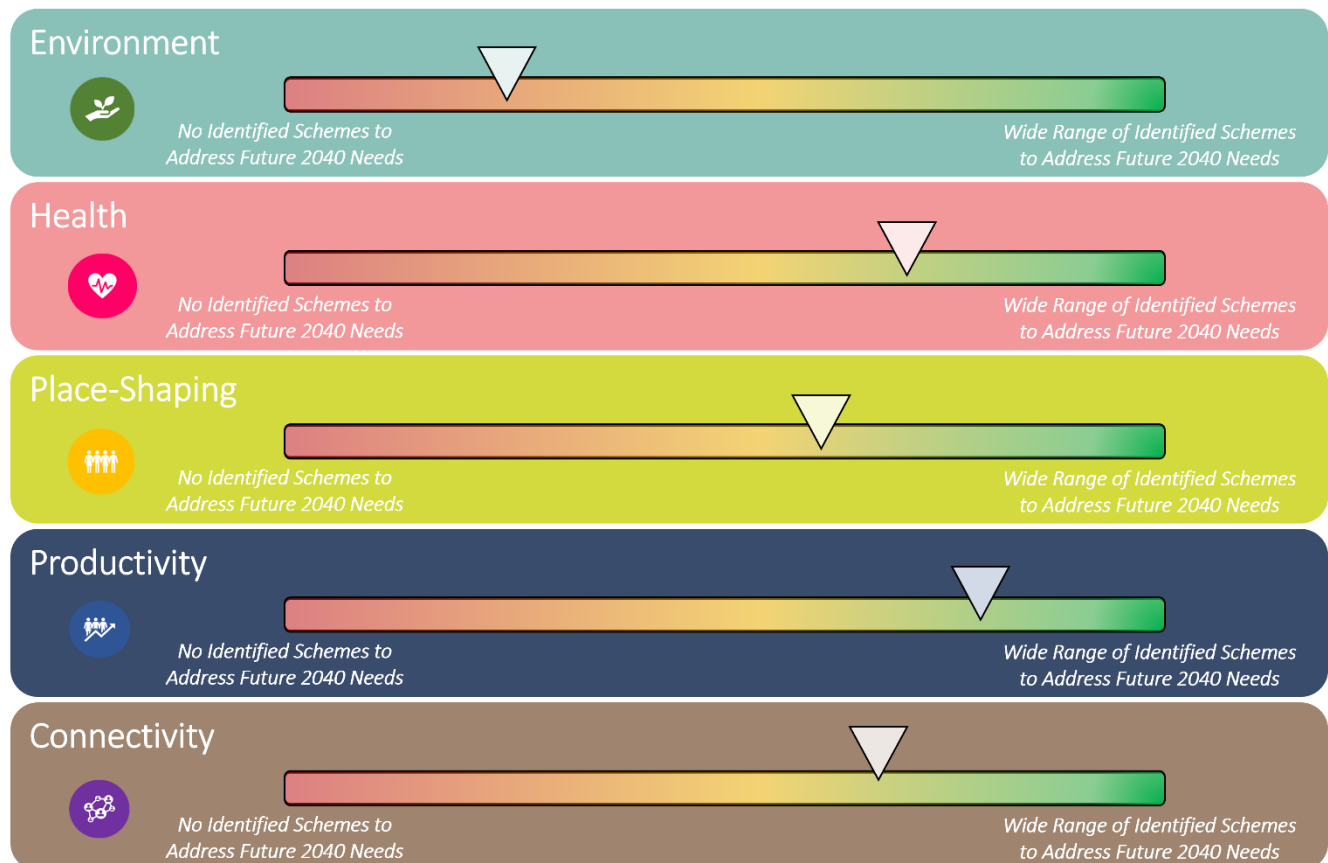

Figure 6-8: OxIS Scheme Gaps by Theme

6.6.1   Environment Related Scheme Gaps

Many of Oxfordshire's IDPs and wider policy and strategy documents pre-date the declaration of a climate emergency in 2019 and the subsequent county-wide and district Climate Action Frameworks produced in 2020 and 2021. This recent shift in priorities means there is a substantial absence of schemes currently identified which specifically aim to reduce carbon emissions across the county, further highlighting the need for this updated and needs-based OxIS.

The National Infrastructure Commission Report (2020) identifies a critical need for future infrastructure schemes to reduce carbon emissions both from energy and transport sources (see Section 5.2), which comprise approximately 82% of Oxfordshire's carbon emissions.

Environment

No Identified Schemes to Address Future 2040 Needs   *Wide Range of Identified Schemes to Address Future 2040 Needs*
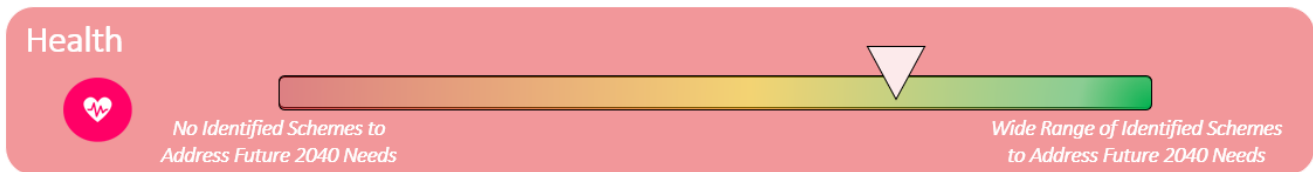
Recommended Additional Future Schemes to Address Environment Needs to 2040

- **Home Energy Efficiency Retrofitting Schemes:** Domestic energy is responsible for 26% of Oxfordshire's carbon emissions. Aside from local authority funding through the Better Homes, Better Health support service and some ongoing schemes to retrofit Oxford City council housing stock, there are no other identified similar domestic retrofitting schemes. Schemes should differentiate between providing for those who are fuel poor and need grant support and those that need market / structural incentive.

- **Zero Carbon Heat Network Schemes:** Gas networks currently heat over 240,000 of Oxfordshire's buildings. It is critical to rapidly switch to zero carbon sources by retrofitting buildings, including the installation of heat pumps, or exploring alternative fuels. New gas connections should be phased out in accordance with the UK Government's upcoming strategy.

- **Electric Vehicle Charging Schemes:** Emissions from road transport are responsible for 46% of Oxfordshire's total emissions. The emerging Transport Decarbonisation Plan and the Oxfordshire Electric Vehicle Charging Infrastructure Strategy indicate the scale of infrastructure required and intervention is likely to be needed to ensure universal coverage across the county, particularly in rural areas.

- **Strategic Flood Alleviation Schemes:** Strategic schemes beyond the Oxford Flood Alleviation Scheme which combat the impact of climate change to protect existing and future planned homes from flooding.

- **Zero Emission Zones:** There is an opportunity to utilise Oxford's emerging zero emission zone as a platform for wider scheme implementation across Oxfordshire's wider towns to promote modal shift and accelerate the transition to the use of electric vehicles.

- **Freight Decarbonisation Hubs:** There is a need to identify schemes which support the rapid recharging of electric or hydrogen freight vehicles to ensure zero carbon goods deliveries.

- **Zero Carbon Public Transport Schemes:** There is a need for future infrastructure schemes to enable zero carbon emissions from public transport (e.g. through bus recharging facilities, use of solar power and rail electrification schemes). It is proposed that Oxford will be one of the first zero-emission bus areas in the UK, and once in place should be able to offer opportunities and lessons learnt for other UK towns.

- **Habitat & Biodiversity Restoration Schemes:** There are limited identified strategic schemes to fulfil Oxfordshire's need to achieve biodiversity net gain across the county. There is an opportunity through the emerging Oxfordshire Nature Recovery Strategy to identify schemes in the Nature Recovery Zone to enhance habitat restoration and to integrate this with wider infrastructure types such as flood alleviation and transport.

- **Renewable Energy Schemes:** The electrical and gas networks account for 36% of all County carbon emissions. Analysis of the potential for renewable energy sources, is needed to set out a strategy to support zero carbon production and consumption as well as understanding the need for carbon offsetting and managing residual gaps.

- **Waste Disposal Infrastructure:** There is a need for further waste disposal schemes to be identified such as Household Waste and Recycling Centres to fulfil future demands as a result of population growth

6.6.2   Health Related Scheme Gaps

The identified schemes do not fully address Oxfordshire's needs for a more preventative approach to enhancing people's physical and mental health. In particular, the COVID-19 crisis has raised the profile of the role that access to green space and space for physical activity plays in addressing health inequalities and enhancing people's mental health and wellbeing.

Health

No Identified Schemes to Address Future 2040 Needs

Wide Range of Identified Schemes to Address Future 2040 Needs

Recommended Additional Future Schemes to Address Health Needs to 2040

- **Outdoor Green Space Schemes:** In some districts, there is a lack of identified strategic outdoor green space schemes, such as parks, to address Oxfordshire's future need to improve people's physical activity levels, mental health and social integration. Preventative measures like this, which are now embedded in health policy and strategies, allow the opportunity to encourage healthy lifestyles and reduce health inequalities across Oxfordshire.

- **Indoor and Outdoor Sport Schemes:** Some District Councils do not identify specific strategic indoor and outdoor sport and leisure schemes, such as swimming pools, sports halls and playing pitches, to address the future need to improve people's physical activity levels, and mental health. There is an opportunity for District Councils to identify strategic schemes as part of upcoming reviews

- **GP & Healthcentres:** The funding limitations of the OCCG mean there is a lack of tangible GP and health centre schemes to address Oxfordshire's future need to ensure sufficient primary care access in locations, particularly to serve allocations that have only recently been designated in Local Plans (e.g. South Oxfordshire Local Plan). This includes sites such as south of Grenoble Road, Northfield, land north of Bayswater Brook, Wallingford and Kingston Bagpuize alongside allocated growth in Oxford. There is an opportunity for greater partnership working and additional capital contributions to ensure that schemes are developed in line with trajectories of future site delivery.

- **Social Care Schemes:** There is an absence of adult social care schemes currently identified to address Oxfordshire's future needs to accommodate for the ageing population.

See also Zero Emission Zone Scheme Gap in Environment

6.6.3   Place-Shaping Related Scheme Gaps

Whilst there are several identified schemes, such as active travel improvements, which address many of the place-shaping needs, there is lack of schemes intended to address Oxfordshire's needs to improve social cohesion and the perception of crime occurring.

Place-Shaping

No Identified Schemes to Address Future 2040 Needs

Wide Range of Identified Schemes to Address Future 2040 Needs
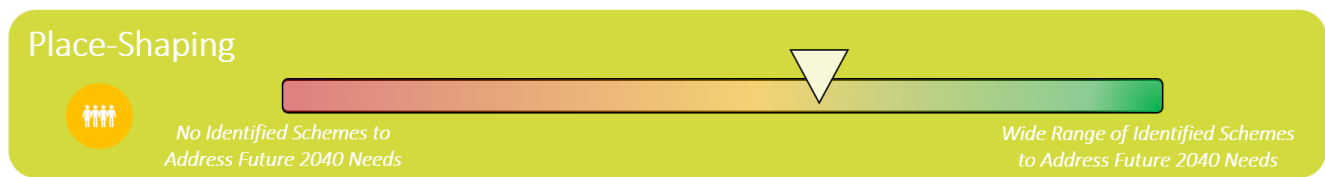
Recommended Additional Future Schemes to Address Place-Shaping Needs to 2040

- **Community Safety Schemes:** There is a lack of schemes, such as public realm or area-wide lighting improvements, which are specifically intended to address Oxfordshire's need to improve community safety.

- **Strategic Cycling Schemes:** Whilst there are several schemes associated with the emerging Local Cycling & Walking Implementation Plans to enhance active connectivity within the confines of some of Oxfordshire's towns and villages, there is a lack of identified schemes to strategically connect these communities together, particularly rural villages. Through partnership working between the Oxfordshire Local Authorities, there is an opportunity to develop an Oxfordshire-wide cycling network to ensure a more integrated approach.

- **Cycle Infrastructure in OxIS Rural Communities:** There are some established and future Local Cycling and Walking Infrastructure Plans in towns across the county, however, these should be completed for all OxIS Towns and Surrounds and OxIS Rural Communities to ensure suitable cycle infrastructure supporting growth is provided.

- **Library & Arts Centre Schemes:** In anticipation of the upcoming OCC Cultural Strategy, there is currently a lack of identified cultural schemes, such as libraries and arts centres, to address Oxfordshire's future needs.

- **Rural Community Hubs and Places to Meet:** The COVID-19 crisis has increased Oxfordshire's need to enhance social integration to reduce rising rates of loneliness. There is an opportunity to develop schemes, such as community hubs or public squares, which are specifically intended to improve social cohesion as well as provide alternative ways of providing key local services.

6.6.4   Productivity Related Scheme Gaps

Gaps to address the productivity needs (see Section 5.5) are primarily associated with education schemes, concerning Special Educational Needs alongside adult education schemes. There is also an absence of schemes, such as community hubs or transport schemes, which are specifically intended to address Oxfordshire's socio-economic inequalities.

Productivity

No Identified Schemes to Address Future 2040 Needs — *Wide Range of Identified Schemes to Address Future 2040 Needs*

Recommended Additional Future Schemes to Address Productivity Needs to 2040

- **Special Educational Needs Schemes:** There is a need for the development of schemes to alleviate the shortage of special school places by increasing capacity across the county.

- **Adult Education Schemes:** The economic impacts of COVID-19 combined with the need to build a global innovation ecosystem, means there is a requirement for additional adult education schemes across Oxfordshire to upskill and retrain adults to align with the future workforce requirements.

- **Schemes Specifically Targeting Socio-Economic Inequalities:** There is a need for intervention schemes which address the need to reduce socio-economic inequalities (e.g. Blackbird Leys in Oxford, Ruscote in Banbury).

- **Affordable Housing Schemes:** The delivery of approximately 70,000 new homes during the Core Local Plan Period will address the historic housing shortfall in Oxfordshire, however, it is essential that a considerable proportion of these homes are truly affordable to fulfil the need to attract and retain talent in the county.

- **Rural Business Hubs:** Supporting greater self-containment and liveability of rural communities through provision of hubs with the ability to support small business growth.

6.6.5   Connectivity Scheme Gaps

As outlined in Figure 6-8 a key strategic gap in overall schemes is the absence of digital connectivity. As outline in Section 5.6.1, there are significant shortcomings in the existing digital infrastructure, particularly in urban areas. This has been amplified by the recent spike in home working and shopping, as well as significant global uptake in digital technology. Other needs are highlighted by the recent National Bus Strategy, which requires the development of a Bus Service Improvement Plan to set out the county's plan for improving bus services for passengers and making it a viable alternative to private car use. Both digital and bus connectivity also play an important role in helping to tackle inequality across the county.

Connectivity

No Identified Schemes to Address Future 2040 Needs — *Wide Range of Identified Schemes to Address Future 2040 Needs*

Recommended Additional Future Schemes to Address Connectivity Needs to 2040

- **Non-Commercial Full Fibre Broadband Schemes:** Oxfordshire has 16.5% of the county covered by full-fibre broadband which is behind the national average, although marginally higher than comparable neighbouring counties. There is a need for subsidised local schemes through established national schemes such as Project Gigabit alongside funding from OCC to bridge this connectivity gap, where broadband roll-out is commercially unviable.

- **Digital Upgrade of Public Assets:** The onset of 5G and the Internet of Things means there is an opportunity for further schemes to be identified (e.g. digitalisation of street furniture)

- **Electricity Supply Grid Capacity Schemes:** There is currently an absence of tangible strategic schemes identified by Oxfordshire's Distribution Network Operators (DNOs) to address the combined challenge of additional grid demand placed by future housing growth in the county alongside increasing electric vehicle charging infrastructure.

- **Wastewater Schemes:** There is a lack of strategic schemes currently identified to ensure that the need for sufficient wastewater processing capacity across Oxfordshire continues to be met in the context of future population growth. Partnership working with Thames Water is required to identify any forthcoming schemes. Wastewater schemes that are fully funded by Thames Water are excluded from scheme appraisal.

- **Rapid Transit Schemes:** Similar to bus priority, rapid transit schemes in the form of quality bus, tram or rail services are internationally recognised to provide multiple benefits to address key OxIS Needs.

- **Upgraded Rural River Thames Crossings:** Journey time evidence indicates that there are infrastructure connectivity constraints across the River Thames for heavier vehicles (including buses) between communities in the Vale of White Horse, such as Faringdon, Shrivenham and Wantage and OxIS Town and Surrounds in West Oxfordshire, including Witney and Carterton.