



Development Management Plan (Regulation 18 stage)

Infrastructure Delivery Plan Addendum

June 2016

1. Introduction

- 1.1 This Infrastructure Delivery Plan (IDP) Addendum provides a partial update to the IDP Addendum previously published in March 2015.
- 1.2 It brings together further information about the local infrastructure requirements arising from possible development sites identified for consultation purposes in the Development Management Plan (DMP) Regulation 18 consultation document, including possible urban extension sites. It draws on separate evidence base documents prepared to inform the consultation document and on-going discussions with local infrastructure providers carried out as part of its development. This document should therefore be read in conjunction with:
- Education Infrastructure Needs Assessment 2016
 - Health Infrastructure Needs Assessment 2016
 - Reigate & Banstead Local Plan Transport Assessment 2016
 - Sustainable Urban Extensions Technical Report 2016
- 1.3 Where updated information is available, additional or revised entries to the project schedules in the IDP 2015 document are set out in Annex 1. This reflects the best information available at the time of writing, although it is recognised that needs and infrastructure providers' plans are likely to change and evolve (i) as further work is undertaken (after the Regulation 18 consultation) to prepare the final draft DMP, and (ii) over the plan period. In particular, once site allocations (including for sustainable urban extensions) have been identified, further and more specific infrastructure needs associated with these sites may arise. The IDP will therefore continue to be regularly updated as the DMP progresses towards adoption.

2. Updates to infrastructure requirements

2.1 Further commentary is provided in this section about the key updates to evidence about future infrastructure requirements since the 2015 Addendum.

Education

2.2 In order to anticipate and plan for the educational requirements arising in the borough, the Council has prepared a separate Education Infrastructure Needs Assessment.

2.3 This paper uses school place projections from Surrey County Council as a starting point, supplemented by local sensitivity testing, to forecast the likely requirement for additional forms of entry at both primary and secondary schools in the borough in order to meet the needs generated as a result of demographic change and future housing growth. The assessment examines the period up to 2035, recognising that the full effect of new developments may not be felt until after 2027.

2.4 In summary, the assessment identifies that the greatest pressure for additional forms of entry, in both the primary and secondary sectors, is in the Redhill/Reigate area.

Area	Source	Primary	Secondary
Banstead	Urban growth	No additional FE	1FE by 2018/19
	Urban extensions (SCC)	N/A	N/A
	Urban extensions (sensitivity)	N/A	N/A
Redhill/Reigate	Urban growth	2FE by 2017/18	6FE by 2018/19 4FE by 2022/23
	Urban extensions (SCC)	Up to 0.5FE by 2024/25	1FE by 2025/26
	Urban extensions (sensitivity)	Up to 2FE by 2028/29	Up to 2FE by 2034/35
Horley	Urban growth	2FE by 2019/20	1FE by 2019/20 1FE by 2022/23
	Urban extensions (SCC)	No additional FE	No additional FE
	Urban extensions (sensitivity)	Up to 0.5FE by 2028/29	Up to 0.5FE by 2032/33

FE = forms of entry

2.5 Projects to meet these future projected needs are captured in Annex 1. This includes both specific short-term projects identified through discussions with Surrey County Council and the Education Funding Agency (which is responsible for delivering free schools) and long-term requirements for which specific projects have yet to be identified. These projects replace entries **1/1-1/7**, **2/18** and **2/20** in the March 2015 IDP Addendum.

2.6 The cost of these projects has been estimated using the following multipliers:

- Primary: £13,980 per place
- Secondary: £21,064 per place

2.7 The funding gap figures have been estimated in the same way as the 2015 IDP Addendum. This assumed – based on a broad assessment of the cost new school

places on a county-wide basis - that Government funding received by SCC would cover approximately 40% of total costs. However, it is recognised that the model and mechanisms for providing new schools is changing with the move towards free schools and with the role of the Education Funding Agency. As such, the sources and availability of funding may also change.

Transport

- 2.8 Since the 2015 Addendum, a number of additional transport infrastructure requirements have been identified as a result of:
- Evidence prepared to support the Development Management Plan Regulation 18 consultation including the 2016 Transport Assessment and identification of high level site specific transport interventions for urban extensions
 - Funding bids for transport improvement packages made by SCC, including to the Local Enterprise Partnership.
- 2.9 The 2016 Transport Assessment identifies the likely impact of planned development on traffic and congestion on the borough's roads. For the most part, the assessment identifies that the effect of additional trips generated by new development has a modest impact on individual roads and junction in the borough. However, the study identifies a number of existing "hotspots" where there is little or no remaining capacity and as such, even modest increases in flow exacerbates delay and worsens the conditions experienced by users.
- 2.10 Many of these corridors are already the focus of existing and planned initiatives and projects to improve conditions and ease congestion. In discussion with Surrey County Council, a number of on-going and proposed strategic transport packages have been identified. These packages – which are set out in Annex 2 – comprise a combination of highway measures, improvements to pedestrian and cyclist routes and facilities, and enhancements to bus infrastructure and public transport connectivity and are designed to help widen transport options, reduce car use and ease congestion. The majority of these schemes are intended to be delivered over the short to medium term (i.e. within 5 years).
- 2.11 Whilst some of these projects already have funding, some are the subject of bids to the Local Enterprise Partnership (LEP) and are at Expression of Interest stage. For these, funding cannot be guaranteed at this point. The amount being requested as part of any bids is therefore included as the funding gap.
- 2.12 It is recognised that there are some areas of overlap between the contents of the strategic transport packages/bids set out in Annex 2 and some of the individual projects identified previously in the 2015 IDP Addendum and within the Reigate and Banstead Draft Forward Programme prepared by SCC as part of the Surrey Transport Plan. Where possible, any possible overlap has been identified in the relevant entries in Annex 1.
- 2.13 The Council – in liaison with the County Council – has also identified, in broad terms, the local transport improvements which are likely to be required to support and enable the development of possible urban extension sites in the event that the decision is taken to allocate them. These interventions – detailed in Annex 3 – flow from the findings of the Transport Assessment and analysis of local travel patterns/transport facilities. These interventions are not currently of sufficient detail to be included within the IDP Schedules but may develop into specific projects as the DMP progresses.

Health

- 2.14 To support the Development Management Plan Regulation 18 consultation document, further analysis of potential health infrastructure needs, particular GP services has been carried out. This is captured in the Health Infrastructure Needs Assessment and replaces the analysis set out in the 2015 IDP Addendum
- 2.15 This assessment is a theoretical exercise which adopts commonly used patient ratios/“benchmarks” to determine the adequacy of current provision and potential future need.
- 2.16 In summary, the assessment identifies that the need for additional primary healthcare capacity is likely to be centred on the centre (Redhill/Reigate) and south (Horley) of the borough. There is theoretically sufficient capacity in the network in the north of the borough to cover needs arising over the period to 2027.

Table 1: Summary of theoretical need for additional healthcare capacity

Area	Primary healthcare	Acute healthcare
North of borough (Surrey Downs CCG)	<ul style="list-style-type: none"> Currently a theoretical surplus of GP capacity Unlikely to be a need for additional GP capacity during the plan period 	Theoretical need for: <ul style="list-style-type: none"> 26 additional general care beds 9 additional acute care beds
Redhill/ Reigate (Centre of borough) (East Surrey CCG)	<ul style="list-style-type: none"> GP provision currently operating at theoretical capacity Theoretical need for additional capacity equivalent to at least 2.7 full time GPs over plan period, split as follows: <ul style="list-style-type: none"> Up to 2 in Merstham/Redhill At least 1 in Woodhatch 	
South of borough (East Surrey CCG)	<ul style="list-style-type: none"> GP provision currently operating slightly above theoretical capacity. Theoretical need for additional capacity equivalent to at least 4 full time GPs over plan period 	

- 2.17 As discussed in the evidence paper, this is a theoretical exercise and needs to be set within the context of the significant transformation occurring in the primary healthcare sector – both nationally and locally. This includes a move towards integrating and widening access to a greater range of health services (e.g. mental health, diagnostic tests, community care) within the community (for example through “care hubs”), rather than providing fragmented services across a number of separate sites.
- 2.18 The intention of the ‘hub’ concept is to focus on making best use of existing assets – both people and physical estate – reducing the need and pressure to build new facilities to provide improved/expanded care, and maximising the capacity of limited funding and staff resources. In providing greater access to alternative health services, including prevention, hubs may – whilst not directly providing additional GPs – enable the “freeing up” of existing capacity (i.e. potentially enabling individual GPs to deal with a greater number of patients).
- 2.19 The separate Healthcare Infrastructure Needs Evidence paper, identifies that, in broad terms, needs arising – and CCG aspirations for “hub” provision - are likely to be capable of being met through expansion of existing surgeries in the Redhill/Merstham area. In the south of the borough, a site has been secured in the

Horley North West Sector for a medical facility which would be capable of accommodating the theoretical needs identified. However, the paper also identifies that the Woodhatch area is relatively underserved by existing GP services and that – in order to both secure sufficient capacity and in recognition of CCG aspirations to move towards a hub model – a new site/facility may be beneficial.

- 2.20 The needs identified in the Healthcare Infrastructure Needs Evidence paper are captured by three broad projects in Annex 1. These projects replace entries **1/29**, **1/30** and **2/24** in the March 2015 IDP Addendum. Costs for these entries have been estimated using NHS England’s practice size matrix (see below) and indicative construction cost multiplier which is currently £2,217 per sqm (excluding land).

Table 2: NHS England Practice Size Matrix

Number of patients (up to)	2,000	4,000	6,000	8,000	10,000
Gross internal area (sqm)	199	333	500	667	833
Number of patients (up to)	12,000	14,000	16,000	18,000	20,000
Gross internal area (sqm)	916	1,000	1,083	1,167	1,250

Utilities

- 2.21 In preparing the Development Management Plan Regulation 18 consultation document, the Council has engaged further with local utilities providers to identify whether any network improvements are likely to be required, specifically in relation to potential urban extension site options.
- 2.22 Summarised below are the initial views of local utilities providers, specifically in relation to network requirements for potential urban extensions sites. These views should be read in the context of the very early stage of development which the DMP is at: site specific investigations will be required – and any necessary reinforcements confirmed – as more firm proposals emerge; this would most likely be at the point of a planning application.

Provider	Comments
SGN (Scotia Gas Networks)	<ul style="list-style-type: none"> No obvious issues in regards to network absorbing growth – network generally looks quite robust as a whole Further information regarding exact connection/off-take points required to confirm local reinforcement requirements
UK Power Networks (UKPN)	<ul style="list-style-type: none"> From a high level view, network in this area looks robust and adequate to accommodate significant connections of the nature proposed Developments will likely be fed from Reigate or Nutfield primary substations Connections will likely be via existing 11kV feeder circuits or new circuits depending on developer’s power requirements
Sutton and East Surrey Water	<ul style="list-style-type: none"> The potential sites are unlikely to generate a need for strategic reinforcements to trunk mains. The trigger for reinforcements to strategic trunk mains in Merstham, south Horley and South West Reigate is approximately 1,000 additional properties in each location (i.e. significantly more than potential urban extensions). However, local reinforcements are likely to be required as follows: <ul style="list-style-type: none"> SSW2: Network reinforcements on Sandcross Lane SSW7/SSW9: Network reinforcements on Dovers Green

Road

- ERM4/ERM5: Network reinforcements on Bletchingley Road
- ERM1/ERM2/ERM3: See below
- In East Redhill, 1,000 extra properties would not put undue strain on the trunk main. However, consideration needs to be given to the resilience of supply to Redhill town centre; as such, the potential East Redhill sites (ERM1/2/3) are likely to trigger a need for a new local connection to the trunk main along Nutfield Road.

2.23 Further details of the likely reinforcements which have been identified by Sutton and East Surrey Water are set out in Annex 4. Costs of £400 per linear metre of improvements have been assumed for reinforcements: this is based on comparator schemes and information from utilities providers.

Annex 1: Revised Infrastructure Delivery Plan Project Schedules

The schedule below sets out new IDP entries as well as updated entries for a number of projects previously contained in the March 2015 IDP Addendum. These revisions take account of the new evidence and further investigation in the specific infrastructure themes discussed in the main paper (education, healthcare, utilities and partially transport). For all other aspects of infrastructure, please refer to the 2015 IDP Addendum).

Acronyms: RBBC = Reigate & Banstead Borough Council, SCC = Surrey County Council, CIL = Community Infrastructure Levy, s106 = Section 106 obligations, FE = Forms of Entry, GPF = Growing Places Fund, LSTF = Local Sustainable Transport Fund, LTP = Local Transport Plan, NGP = New Growth Points, HLF = Heritage Lottery Fund, RHT = Raven Housing Trust, CCG – Clinical Commissioning Group, EFA = Education Funding Agency, DfE = Department for Education

SCHEDULE 1: BOROUGHWIDE INFRASTRUCTURE REQUIREMENTS

REF	LOCATION	SCHEME	NEED FOR SCHEME	LEAD DELIVERY AGENCY/ MANAGEMENT ORGANISATION	COST	FUNDING ARRANGEMENTS	GAPS IN FUNDING	DELIVERY PHASING	RISKS TO DELIVERY	CONTINGENCIES/ DEPENDENCIES	CRITICALITY 1=priority 2=important 3=desirable	Comments/ Progress 2016	SOURCE
EDUCATION													
1/1	Redhill/ Merstham	New 2 FE Primary School (Lime Tree Primary)	Increase in school pupil numbers in this area due to recent completion of urban housing development and major schemes such as Watercolour and Park 25.	SCC	Circa £5.9m	SCC, funds allocated	None	From Sept 2016	Low risk	None	1	Under construction at Battlebridge Lane. Operating temporarily at Alexander Road site.	SCC School Organisation Plan April 2014
1/2	Redhill/ Merstham	New 6 FE Secondary School with space to expand to 9FE	Increase in school pupil numbers in this area due to migration and recent housing developments	EFA	Circa £19.0m	EFA SCC	None	From 2017/18	Lack of site or unable to acquire site in time, plans not feasible, need to operate from temporary site	Dependency: Need to find 6 acre site. Contingency: Children go outside area for education, larger class sizes in existing schools	1	Preferred site identified. Plans being developed by EFA. Funding approved in principle by DfE.	SCC School Organisation Plan April 2014
NEW 2016	Redhill/ Merstham	Expansion of existing secondary schools (additional 3FE)	Increase in school pupil numbers in this area due to migration and recent housing developments	SCC	Circa £9.5m	SCC	Estimated £5.8m	From Sept 2017	Expansion not feasible, planning	Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools	1	School identified and plans being developed.	SCC School Organisation Plan April 2014
NEW 2016	Redhill/ Merstham	Longer term expansion of new secondary school (up to additional 3FE) – linked to 1/2 above	Increase in school pupil due to long term urban housing growth and urban extensions	SCC EFA	Circa £9.5m	SCC EFA	Estimated £5.8m	10-15 years	Lack of site or unable to acquire site in time, plans not feasible	Dependency: Need to find 6 acre site. Contingency: Children go outside area for education, larger class sizes in existing schools	1	Preferred site identified. Plans being developed by EFA. Funding approved in principle by DfE.	SCC School Organisation Plan April 2014
1/3	Redhill/ Reigate	Expansion of existing primary schools (additional 3FE)	Increase in school pupil numbers in this area due to migration and recent housing developments	SCC	Circa £8.8m	SCC, CIL, private sector partnership, other grant - non allocated	None	For 2016/17 academic year	Low risk	Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools	1	Schools identified and agreed: Reigate Parish St Joseph's Primary Dovers Green Infant	SCC School Organisation Plan April 2014
1/4	Redhill/ Reigate	New 2FE primary school	Increase in school pupil numbers in this area due to migration and on-going urban housing growth	SCC	Circa £5.9m	SCC/EFA	Estimated £3.6m	2-3 years	Lack of sites, funding issues	Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools	1	Proposal through Reg 18 DMP to earmark urban site for a school (Redhill Law Courts)	SCC School Organisation Plan April 2014
NEW 2016	Redhill/ Reigate	New (up to) 2FE primary school	Increase in school pupil numbers arising as a result of potential urban extensions	SCC	Circa £5.9m	CIL SCC/EFA Developer provision of land/site	Estimated £3.6m	5-10 years	Funding issues	Dependencies: timing of delivery of urban extensions Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools	1	Proposal through Reg 18 DMP to safeguard site within any future urban extensions allocation east of Redhill	<i>Infrastructure Needs Evidence: Education</i>
NEW 2016	Banstead/ Tadworth	Expansion of existing secondary school (additional 1FE)	Increase in school pupil numbers in this area due to migration and recent housing developments	SCC	Circa £3.2m	SCC CIL	Estimated £2.0m	2-3 years	Expansion not feasible, planning	Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools	2	None	SCC
NEW 2016	Horley	Early years (pre-primary) education facility	Early years education capacity is likely to be exceeded in Horley with the development of the NE and NW sectors	SCC	Not known	Unknown	Not costed	Short term within 5 years	Lack of site, funding issues	Accept high use at existing facilities, investigate expansion of existing facilities	1	Being provided as part of Trinity Oaks Primary School (see entry 1/7)	SCC

REF	LOCATION	SCHEME	NEED FOR SCHEME	LEAD DELIVERY AGENCY/ MANAGEMENT ORGANISATION	COST	FUNDING ARRANGEMENTS	GAPS IN FUNDING	DELIVERY PHASING	RISKS TO DELIVERY	CONTINGENCIES/ DEPENDENCIES	CRITICALITY 1=priority 2=important 3=desirable	Comments/ Progress 2016	SOURCE
2/18	Horley NW	New 2FE primary school	Identified in adopted Local Plan / Horley Infrastructure SPD to provide additional primary places to cater for need generated from new development in Horley (particularly the Sectors). In addition to school already built in NE Sector	SCC	Circa £5.9m	Developer contributions (s106) SCC CIL	Potential funding gap of up to circa £1m	5-7 years	Low risk	Dependencies: SCC accepting land secured in s106 agreements, provider interest (free-schools), timing of delivery of housing at NW Sector	1	NW Sector development has commenced (infrastructure works); first units anticipated late 2016	SCC Horley Masterplan
2/20	Horley	Expansion of existing secondary school (additional 2.5FE)	Identified in adopted Local Plan / Horley Infrastructure SPD to Provide more secondary/post 16 school places to cater for need generated from new development and potential urban extensions.	SCC	Circa £7.9m	Developer contributions (s106) CIL	Potential funding gap of up to £5.8m ¹	5+ years	Low risk	Dependencies: timing of delivery of housing at NW Sector and urban extensions, funding, Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools	1		SCC
NEW 2016	Horley	Expansion of existing primary school (additional 0.5FE)	Increase in school pupil numbers arising as a result of potential urban extensions	SCC	Circa £1.5m	SCC CIL	Estimated £0.9m	10-15 years	Expansion not feasible, planning, funding issues	Dependencies: timing of delivery of housing at NW Sector and urban extensions, funding, Contingency: Bulge classes, children go outside area for education, larger class sizes in existing schools			
HEALTHCARE													
1/30	Redhill/ Merstham	Provision of additional primary/community health capacity (equivalent to up to 2 full time GP)	To provide GP services to meet need arising from growing population	NHS England/ East Surrey CCG	Circa £0.9m	CIL NHS Developer provision of land/site	£0.9m	5-10 years	Insufficient funds, feasibility of expansion	None	2	None	RBBC analysis
1/30	Reigate/ Woodhatch	Provision of additional primary/community health capacity (equivalent to at least 1 full time GP)	To provide GP services to meet need arising from growing population	NHS England/ East Surrey CCG	Circa £1.1m	CIL NHS Developer provision of land/site	£1.1m	5-10 years	Insufficient funds, CCG alternative plans, site not available	Dependencies: Availability of alternative site, CCG hubs plans	2	Site recommended to be safeguarded as part of any future SW Reigate urban extension	RBBC analysis
2/24	South of borough	Provision of additional primary/community health capacity (equivalent to 4 full time GP)	To provide GP services to meet need arising from growing population	NHS England/ East Surrey CCG	Circa £1.48m	CIL NHS Developer provision of land/site (NW Sector)	£1.48m	2-3 years	Insufficient funds, site not suitable, CCG alternative plans	Dependencies: CCG take up of site secured in NW Sector; CCG hub plans	2	Site for a medical centre secured through NWS S106 agreement	RBBC analysis
TRANSPORT – STRATEGIC PROJECTS													
NEW 2016	A217/A23/ A25	Wider Network Benefits Scheme (see Annex 2)	To reduce congestion and improvement management of traffic on main road links in the borough	SCC	Circa £3.75m	SCC (20%) Coast to Capital LEP Local Growth Fund (80%)	£0	1-2 years	None	Dependencies: dependent upon locations being identified for proposed technologies/improvements	2	Funding approved by LEP	SCC
NEW 2016	A217	A217 Network Resilience Scheme (see Annex 2)	To improve resilience of key transport routes to flooding, thereby reducing downtime and blockages	SCC	Circa £3.225m	SCC (15%) Coast to Capital LEP Local Growth Fund (85%)	£0	1-2 years	None	None	2	None	SCC
NEW 2016	Redhill	Greater Redhill Sustainable Transport Package 1 (see Annex 2)	To improve viability of walking and cycling and enhance reliability and accessibility of bus services and journeys to encourage modal shift and reduce congestion (focused in and on key routes to Redhill)	SCC	Circa £4.90m	Developer contributions (25%) Coast to Capital LEP Local Growth Fund (75%)	£0	1-2 years	None	None	2	Underway – projects being delivered. Potential overlap with following projects in 2015 IDP: 1/31, 1/32, 1/33, 1/34, 1/36 and 1/39	SCC
NEW 2016	Redhill/ Reigate/ Merstham/ Horley	Greater Redhill Sustainable Transport Package 2 (see Annex 2)	To improve viability of walking and cycling to encourage modal shift and reduce congestion (covering Redhill, Reigate, Merstham and Horley)	SCC	Circa £4.95m	SCC LEP – not allocated Developer contributions	£4.21m	3-5 years	Unable to secure funding	Dependencies: linked to Greater Redhill STP1, benefits will only be fully realized in conjunction with this project	2	Expression of interest made to Coast to Capital LEP LGF for funding. Potential overlap with following projects in 2015 IDP: 1/37 and 1/38	SCC

REF	LOCATION	SCHEME	NEED FOR SCHEME	LEAD DELIVERY AGENCY/ MANAGEMENT ORGANISATION	COST	FUNDING ARRANGEMENTS	GAPS IN FUNDING	DELIVERY PHASING	RISKS TO DELIVERY	CONTINGENCIES/ DEPENDENCIES	CRITICALITY 1=priority 2=important 3=desirable	Comments/ Progress 2016	SOURCE
NEW 2016	Reigate/ Redhill	Reigate & Redhill Quality Bus Corridor (see Annex 2)	To improve accessibility and reliability of bus journeys and enhance interchange with other transport modes. Encourage modal shift and reduce congestion around two main towns	SCC Bus operators	Circa £4.90m	SCC LEP – not allocated	£3.65m	3-5 years	Unable to secure funding	Dependencies: linked to Greater Redhill STP1, benefits will only be fully realized in conjunction with this project	2	Expression of interest made to Coast to Capital LEP LGF for funding	SCC
NEW 2016	Reigate	Reigate Transport Package (see Annex 2)	To reduce congestion within the town centre and improve the operation and traffic flow of key junctions to ease congestion and delay	SCC	Circa £4.95m	SCC LEP – not allocated	£4.20m	3-5 years	Unable to secure funding, feasibility of improvements	Dependencies: Subject to feasibility of individual projects	1	Expression of interest made to Coast to Capital LEP LGF for funding. Potential overlap with the following projects in 2015 IDP: 1/59 (part), 1/63	SCC
NEW 2016	Banstead/ Preston/ Tattenham	Epsom to Banstead STP (see Annex 2)	To improve viability of walking and cycling and enhance reliability and accessibility of bus services and journeys to encourage modal shift and reduce congestion	SCC	Circa £4.8m	SCC LEP – not allocated Developer contributions	£3.60m	3-5 years	Unable to secure funding, feasibility of improvements	Dependencies: Subject to feasibility of individual projects, linked to Preston regeneration projects	1	Expression of interest made to Coast to Capital LEP LGF for funding. Potential overlap with following projects in 2015 IDP: 1/42, 1/66, 1/67, 1/68, 1/40 (part)	SCC
UTILITIES													
NEW 2016	East Redhill	Local water supply network reinforcements on Nutfield Road	To ensure and maintain sufficient standard of water supply to both new and existing homes	SESW	Circa £300k	Developer	£300k	3-5 years	Feasibility of improvements	Dependencies: dependent upon timing of East Redhill urban extension	2	None	SESW
NEW 2016	South West Reigate	Local water supply network reinforcements on Sandcross Lane/Prices Lane	To ensure and maintain sufficient standard of water supply to both new and existing homes	SESW	Circa £400k	Developer	£400k	3-5 years	Feasibility of improvements	Dependencies: dependent upon timing of South West Reigate urban extension	2	None	SESW
NEW 2016	South West Reigate	Local water supply network reinforcements on Dovers Green Road	To ensure and maintain sufficient standard of water supply to both new and existing homes	SESW	Circa £290k	Developer	£290k	3-5 years	Feasibility of improvements	Dependencies: dependent upon timing of South West Reigate urban extension	2	None	SESW
NEW 2016	East Merstham	Local water supply network reinforcements on Bletchingley Road	To ensure and maintain sufficient standard of water supply to both new and existing homes	SESW	Circa £250k	Developer	£250k	3-5 years	Feasibility of improvements	Dependencies: dependent upon timing of East Merstham urban extension	2	None	SESW
NEW 2016	North West Horley	Local water supply network reinforcements on Meath Green Lane	To ensure and maintain sufficient standard of water supply to both new and existing homes	SESW	Circa £1.25m	Developer	£1.25m	3-5 years	Feasibility of improvements	Dependencies: subject to development of North West Sector	2	None	SESW

Annex 2: Transport “hotspots” and strategic interventions

The table below sets out, for each of the “hotspots” identified in the 2016 Transport Assessment and through discussion with Surrey County Council, the relevant strategic transport initiatives (and specific works/interventions within them) and an explanation of how these will help – either directly or indirectly – to address the capacity challenges and improve conditions for road users. These interventions – for the most part – are not directly related to any individual development. The hotspots are set out in Table 2 and Figure 1 below and have been grouped into key corridors.

The table also identifies a number of areas where further investigation is either on-going, or may be required in the future.

TABLE 1: SUMMARY OF STRATEGIC TRANSPORT INTERVENTIONS AND ANTICIPATED IMPACT ON “HOTSPOTS”

Hotspots	Strategic Scheme	Measures/improvements proposed	How will it help?	Areas of further investigation
A217 Corridor (Banstead) <i>Junctions</i> <ul style="list-style-type: none"> - A217 Brighton Road signalled junction with A2022 Winkworth Road (Banstead crossroads) - A217 Brighton Road signalled roundabout to Bonsor Drive (Tadworth roundabout) northbound approach - A217 Belmont Rise roundabout junction with B2230 Brighton Road (Belmont roundabout) - B290 Station Approach signalled junction with B2220 Tadworth Street - A2022 Winkworth Road roundabout junction with B2218 <i>Links</i> <ul style="list-style-type: none"> - A217 Belmont Rise - B2230 Brighton Road - B2220 Tadworth Street - Shelveys Way 	Wider Network Benefits Scheme	<ul style="list-style-type: none"> - Measures to manage traffic speeds and flow (average speed cameras at 8 locations on A217 Banstead corridor) - Enhanced live monitoring of traffic flows, speeds, journey times and network incident (through CCTV and ANPR cameras at 39 locations across the A217) - Upgrading of junction and signal controls to enable real-time alterations to timing/signal patterns (10 separate locations on A217 Banstead corridor – including Banstead crossroads and Tadworth roundabout) - Real-time variable messaging on key route decision points (3 locations on A217 Banstead corridor) 	<ul style="list-style-type: none"> - Improved management of traffic, junction and signal performance to ease congestion and improve traffic flow - Signposting of incidents and traffic information to enable informed route decisions and avoid congested routes 	<i>Banstead crossroads:</i> Measures to improve junction arrangement/ capacity to improve flow and reduce delay. Measures to improve junction for pedestrians and cyclists
	Epsom to Banstead Sustainable Transport Package (STP)	<ul style="list-style-type: none"> - Improvement and extension of shared use cycle path and routes along the A217 between Banstead and Preston/Burgh Heath - Upgraded pedestrian crossing points on the A217 at Burgh Wood - Improved link between Banstead High Street and Banstead station 	<ul style="list-style-type: none"> - Widened travel options and improved overall viability of walking and cycling as an alternative to car in order to reduce congestion - Improved access, availability and frequency of bus services to increase attractiveness and avoid unnecessary car use - Enhancement of the operation and safety at key junctions 	
	A217 Network Resilience	<ul style="list-style-type: none"> - Improvements to drainage and surface water management at Belmont roundabout - Upgrading of the water management system on the A217 between Babylon Lane and M25 J8 to increase capacity and reduce blockages during extreme rainfall events 	<ul style="list-style-type: none"> - Increased resilience of the network to flood events and downtime, thus reducing local delays/blockages 	

<p>Preston/Tattenhams <i>Junctions:</i></p> <ul style="list-style-type: none"> - A240 Reigate Road signalled junction with A2022 Fir Tree Road (Driftbridge) <p><i>Links</i></p> <ul style="list-style-type: none"> - A2022 Fir Tree Road - A240 Reigate Road - B2221 Great Tattenhams/Tattenham Way 	<p>Epsom to Banstead Sustainable Transport Package (STP)</p>	<ul style="list-style-type: none"> - Upgrading of Tattenham Way traffic signals for improved vehicle capacity - Upgraded pedestrian crossing points on the A217 at Burgh Wood - Improvements to Driftbridge junction, including measures to crossing facilities, junction arrangement and cycle routing - Bus corridor works, including traffic management and infrastructure on the 460/480 and 420 routes - Increased service frequency and evening and weekends - New off-road cycle way along Reigate Road between NESOCOT and Driftbridge junction 	<ul style="list-style-type: none"> - Widened travel options and improved overall viability of walking and cycling as an alternative to car in order to reduce congestion - Improved access, availability and frequency of bus services to increase attractiveness and avoid unnecessary car use - Enhancement of the operation and safety at key junctions 	<p>None</p>
<p>A23 Corridor (Merstham/Redhill/Horley) <i>Junctions:</i></p> <ul style="list-style-type: none"> - A23 Brighton Road signalled junction with Star Lane - A23 Brighton Road priority junction with Dean Lane - A23 Horley Road junction with Three Arch Road and Maple Road (Three Arch Road/East Surrey Hospital junction) - A23 London Road South junction with School Hill - A23 Brighton Road roundabout junction with B2036 Balcombe Road (Chequers roundabout) <p><i>Links:</i></p> <ul style="list-style-type: none"> - A23 London Road South - A23 Brighton Road - A23 Horley Road - A23 London Road - B2036 Balcombe Road 	<p>Wider Network Benefits Scheme</p>	<ul style="list-style-type: none"> - Enhanced live monitoring of traffic flows, speeds, journey times and network incident (through CCTV and ANPR cameras at 19 locations on the A23) - Upgrading of junction and signal controls to enable real-time alterations to timing/signal patterns (18 separate locations on A23 corridor – including Three Arch Road junction, Chequers roundabout) - Real-time variable messaging on key route decision points (3 locations on the A23 corridor) 	<ul style="list-style-type: none"> - Improved management of traffic, junction and signal performance to ease congestion and improve traffic flow - Signposting of incidents and traffic information to enable informed route decisions and avoid congested routes 	<p><i>Three Arch Road junction:</i> Measures to improve junction arrangement/ capacity to improve flow and reduce delay. Measures to improve junction for pedestrians and cyclists (Note: some s106 funds already secured as part of NW Horley development)</p> <p><i>A23/School Hill junction:</i> Measures to improve junction arrangement/ to improve flow.</p>
	<p>Redhill LSTF</p>	<ul style="list-style-type: none"> - Bus corridor improvements on the A23 London Road and A23 Redhill/Horley - Walking and cycling improvements on key routes from Redhill to Merstham (inc. via A23), Redhill to Whitebushes and on radial routes serving employment areas and major housing developments (Watercolour/Park 25) - Improvements to signage – including Variable Message Signage on key routes and in Redhill town centre - Soft measures/initiatives (inc. transport information, travel planning and promotion) 	<ul style="list-style-type: none"> - Widened travel options - Improved overall viability of walking, cycling and public transport as an alternative to car in order to reduce congestion - Enhanced reliability of bus journeys - Improved wayfinding (both vehicular and walking/cycling), reduced instances of traffic unnecessarily circulating on the road network to ease congestion 	
	<p>Redhill Balanced Network</p>	<p>Highway works – including conversion of part of the network to two way working – and junction improvements within Redhill town centre at:</p> <ul style="list-style-type: none"> - A25 Redstone Hill/Noke Drive - Station roundabout - A25 Queensway/Lombard Roundabout - A23 Marketfield Way <p>Complementary improvements to pedestrian and cycle routes, including public realm upgrades</p>	<ul style="list-style-type: none"> - Improved traffic flow and overall highway capacity to cope with traffic levels - Reduced unnecessary circulation of vehicles on the network - Enhanced pedestrian and cycle safety to improve viability of these modes for short journeys 	
	<p>Greater Redhill STP1</p>	<p>Package of sustainable and public transport measures, predominantly along the A23 corridor, linking Redhill, Horley and key rail stations including:</p> <ul style="list-style-type: none"> - Quality bus corridor improvements covering 430/435 and 420/460 bus routes including better passenger/bus stop facilities and bus priority traffic measures at key junctions - Bus only signalised junction on Princess Way/Ladbroke Road - Shared cycle and footpaths along the A23 between Redhill and Horley, and on connective routes to Reigate - Improving and widening off-carriageway cycle routes, including sections of the National Cycle Route 21 between Redhill and Horley 	<ul style="list-style-type: none"> - Improved overall viability of walking and cycling as an alternative to car in order to reduce congestion - Enhanced reliability and accessibility of bus services and journeys - Improved operation of key junctions in Redhill for bus services 	
	<p>Greater Redhill STP 2</p>	<p>Expansion of the Greater Redhill STP1 (above), linking Merstham, Redhill/Reigate and Horley, including the following specific measures:</p> <ul style="list-style-type: none"> - Connecting Merstham to Redhill, Reigate and Holmethorpe industrial estate through a continuous walking/cycling route to the north - Extending cycle routes along the A23 and National Cycle Route 	<ul style="list-style-type: none"> - Improved overall viability of walking, cycling and public transport as an alternative to car in order achieve modal shift and reduce congestion 	

		to link with routes radiating through Horley town centre and on to Gatwick airport		
	Redhill and Reigate Quality Bus Corridor	Package focussed on increasing bus use and service reliability, covering the 100, 400, 420/460 and 430/435 routes which use this corridor and addressing key pinch points for busses: <ul style="list-style-type: none"> - Improved passenger infrastructure and facilities including bus stops and real time service information - Highway/traffic measures including bus friendly traffic management, intelligent priority at junctions/signals and, where possible, bus priority lanes at key pinch points including A23 Brighton Road between Pendleton Road/London Road, Three Arch Road junction and Chequers Roundabout 	<ul style="list-style-type: none"> - Increased ridership on the bus network as an alternative to car trips - Quicker and more reliable bus journey times - Enable – in conjunction with operators – better bus/rail connectivity through journey scheduling, more regular services and later operating (e.g. night services) 	
	Horley Masterplan	Comprehensive package of highways, public transport and sustainable travel infrastructure to support growth in Horley. Key outstanding works include: <ul style="list-style-type: none"> - Funding for off-site junction works specifically at Three Arch Road junction and Woodhatch junction - Horley North West Sector A217/A23 link roads 	<ul style="list-style-type: none"> - Better operation, traffic flow and capacity at key off-site junctions to reduce congestion and improve safety - Increased network capacity and alternative routes through the link roads 	
A217 Corridor (Reigate) <i>Junctions:</i> <ul style="list-style-type: none"> - A217 Brighton Road signalled approach arm to the M25 J8 grade separated junction - A217 Reigate Hill priority junction with Wray Lane - A217 Dovers Green Road signalled junction with Woodhatch Road and Prices Lane (Woodhatch/Angel crossroads) <i>Links:</i> <ul style="list-style-type: none"> - A217 north and south of the town - A217 Cockshot Hill - A2044 Woodhatch Road 	Wider Network Benefits Scheme	<ul style="list-style-type: none"> - Enhanced live monitoring of traffic flows, speeds, journey times and network incident (through CCTV and ANPR cameras at 39 locations across the A217) - Upgrading of junction and signal controls to enable real-time alterations to timing/signal patterns (16 separate locations on A217 Reigate corridor – including Woodhatch junction, M25 J8/Reigate Hill and several points along Cockshot Hill) - Real-time variable messaging on key route decision points (2 locations on the A217 Reigate corridor) 	<ul style="list-style-type: none"> - Improved management of traffic, junction and signal performance to ease congestion and improve traffic flow - Signposting of incidents and traffic information to enable informed route decisions and avoid congested routes 	<i>Woodhatch junction:</i> Measures to improve junction arrangement/ capacity to improve flow and reduce delay. Measures to improve junction for pedestrians and cyclists. (Note: some s106 funds already secured as part of NW Horley development) <i>Reigate level crossing:</i> Investigation of measures to reduce downtime and congestion associated with the level crossing
	A217 Network Resilience	<ul style="list-style-type: none"> - Carriageway reconstruction and upgrades on targeted sections known to flood on the A217 between Reigate and Horley - Local drainage capacity improvements on this route 	<ul style="list-style-type: none"> - Increased resilience of the network to flood events and downtime, thus reducing local delays/blockages 	
	Redhill-Reigate Quality Bus Corridor	Package focussed on increasing bus use and service reliability, covering the 100, 400, 420/460 and 430/435 routes which use this corridor and addressing key pinch points for busses: <ul style="list-style-type: none"> - Improved passenger infrastructure and facilities including bus stops and real time service information - Highway/traffic measures including bus friendly traffic management, intelligent priority at junctions/signals and, where possible, bus priority lanes at key pinch points including Woodhatch junction 	<ul style="list-style-type: none"> - Increased ridership on the bus network as an alternative to car trips - Quicker and more reliable bus journey times - Enable – in conjunction with operators – better bus/rail connectivity through journey scheduling, more regular services and later operating (e.g. night services) 	
	Reigate Transport Package	Expression of interest to the LEP for funding to deliver a package of measures to improve connectivity within Reigate and to surrounding residential areas including: <ul style="list-style-type: none"> - Creation of an off-carriageway cycle route within the town linking to the station and south to Woodhatch junction (avoiding Cockshot Hill) - Intelligent urban traffic systems at key junctions within the town (Bell Street/High Street, Bell Street/Bancroft Road) and variable message signage 	<ul style="list-style-type: none"> - Improved overall viability of walking, cycling and public transport as an alternative to car in order to reduce congestion - Better operation, performance and traffic flow at key junctions to ease congestion/delays 	
	Horley Masterplan	Comprehensive package of highways, public transport and sustainable travel infrastructure to support growth in Horley. Key outstanding works include: <ul style="list-style-type: none"> - Funding for off-site junction works specifically at Three Arch Road junction and Woodhatch junction - Horley North West Sector A217/A23 link roads 	<ul style="list-style-type: none"> - Better operation, traffic flow and capacity at key off-site junctions to reduce congestion and improve safety - Increased network capacity and alternative routes through the link roads 	
Redhill-Reigate (inc. A25 corridor) <i>Links:</i> <ul style="list-style-type: none"> - A25 Bancroft Road - A25 Reigate Road - A25 West Street - A25 Nutfield Road - A25 Redstone Hill - Linkfield Lane - A242 Croydon Road/Gatton Park Road - Cormongers Lane 	Wider Network Benefits Scheme	<ul style="list-style-type: none"> - Enhanced live monitoring of traffic flows, speeds, journey times and network incident (through CCTV and ANPR cameras at 10 locations across the A25) - Upgrading of junction and signal controls to enable real-time alterations to timing/signal patterns (6 separate locations on A25 corridor, particularly focussed on Redhill and Reigate town centres) - Real-time variable messaging on key route decision points (locations on the A25 corridor including Station roundabout (Redhill) and on the A25 approaching Reigate) 	<ul style="list-style-type: none"> - Improved management of traffic, junction and signal performance to ease congestion and improve traffic flow - Signposting of incidents and traffic information to enable informed route decisions and avoid congested routes 	<i>Reigate level crossing:</i> Investigation of measures to reduce downtime and congestion associated with the level crossing

	Redhill LSTF	<ul style="list-style-type: none"> - Bus corridor improvements on B2034 Blackborough Road - Walking and cycling improvements on key routes from Redhill to Reigate - Soft measures/initiatives (inc. transport information, travel planning and promotion) 	<ul style="list-style-type: none"> - Widened travel options - Improved overall viability of walking and cycling as an alternative to car in order to reduce congestion - Enhanced reliability of bus journeys 	
	Redhill Balanced Network	<p>Highway works – including conversion of part of the network to two way working – and junction improvements within Redhill town centre at:</p> <ul style="list-style-type: none"> - A25 Redstone Hill/Noke Drive - Station roundabout - A25 Queensway/Lombard Roundabout - A23 Marketfield Way <p>Complementary improvements to pedestrian and cycle routes, including public realm upgrades</p>	<ul style="list-style-type: none"> - Improved traffic flow and overall highway capacity to cope with traffic levels - Reduced unnecessary circulation of vehicles on the network - Enhanced pedestrian and cycle safety to improve viability of these modes for short journeys 	
Redhill-Reigate (inc. A25 corridor) (cont)	Greater Redhill STP 1	<p>Package of sustainable and public transport measures, predominantly along the A23 corridor, linking Redhill, Horley and key rail stations including:</p> <ul style="list-style-type: none"> - Quality bus corridor improvements covering 430/435 and 420/460 bus routes including better passenger/bus stop facilities and bus priority traffic measures at key junctions 	<ul style="list-style-type: none"> - Enhanced reliability and accessibility of bus services and journeys to encourage modal shift and reduce congestion 	As above
	Greater Redhill STP 2	<p>Expansion of the Greater Redhill STP1 (above), linking Merstham, Redhill/Reigate and Horley, including the following specific measures:</p> <ul style="list-style-type: none"> - Developing walking and cycling routes through Redhill town centre - Improving the walking and cycling provision between Redhill and Reigate town centres, unlocking potential for sustainable travel for short journeys (under 2 miles) 	<ul style="list-style-type: none"> - Improved overall viability of walking, cycling and public transport as an alternative to car in order to achieve modal shift and reduce congestion 	
	Reigate Transport Package	<p>Expression of interest to the LEP for funding to deliver a package of measures to improve connectivity within Reigate and to surrounding residential areas including:</p> <ul style="list-style-type: none"> - Creation of an off-carriageway cycle route within the town linking to the station (via Castlefield Road/Tunnel Road) and existing routes to the east towards Redhill - Intelligent urban traffic systems at key junctions within the town (Bell Street/High Street, Bancroft Road/Church Street, Bell Street/Bancroft Road, London Road/Castlefield Road) and variable message signage 	<ul style="list-style-type: none"> - Improved overall viability of walking, cycling and public transport as an alternative to car in order to reduce congestion - Better operation, performance and traffic flow at key junctions to ease congestion/delays 	
Horley <i>Junctions:</i> <ul style="list-style-type: none"> - Victoria Road junction with Massetts Road <i>Links:</i> <ul style="list-style-type: none"> - C64 Massetts Road - Lee Street 	Redhill and Reigate Quality Bus Corridor	<p>Package focussed on increasing bus use and service reliability, covering the 100, 400, 420/460 and 430/435 routes which use this corridor and addressing key pinch points for busses:</p> <ul style="list-style-type: none"> - Improved passenger infrastructure and facilities including bus stops and real time service information - Highway/traffic measures including bus friendly traffic management, intelligent priority at junctions/signals and, where possible, bus priority lanes at key pinch points including Victoria Road/Massetts Road area 	<ul style="list-style-type: none"> - Increased ridership on the bus network as an alternative to car trips - Quicker and more reliable bus journey times - Enable – in conjunction with operators – better bus/rail connectivity through journey scheduling, more regular services and later operating (e.g. night services) 	None
	Horley Masterplan	<p>Comprehensive package of highways, public transport and sustainable travel infrastructure to support growth in Horley. Key outstanding works include:</p> <ul style="list-style-type: none"> - Town centre/North West Sector bus corridor works (inc. along Massetts Road/Victoria Road and Lee Street/Meath Green Lane) - Cycle improvement projects on routes between the North West Sector and town centre - Horley North West Sector A217/A23 link roads 	<ul style="list-style-type: none"> - Improved overall viability of walking, cycling and public transport as an alternative to car in and around Horley - Enhanced operation of local junctions on including on Lee Street and Massetts Road/Victoria Road - Increased network capacity and alternative routes through the link roads 	

FIGURE 1: GROUPING OF “HOTSPOTS” INTO CORRIDORS

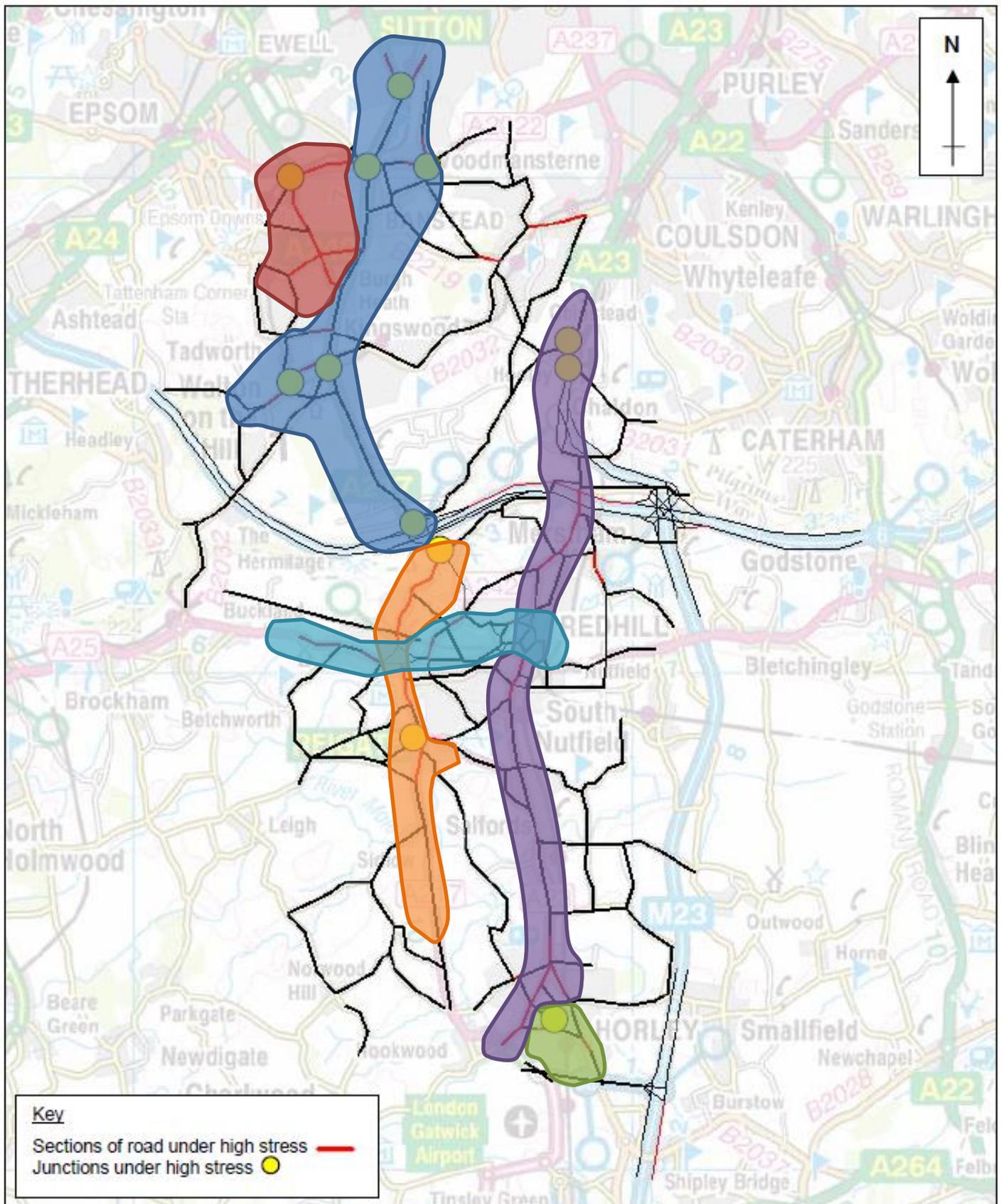


Figure 4.12: Network hotspots

Map source: Reigate & Banstead Transport Assessment 2015

TABLE 2: GROUPING OF “HOTSPOTS” INTO CORRIDORS

<p>A217 Corridor (Banstead)</p> <p><i>Junctions</i></p> <ul style="list-style-type: none"> - A217 Brighton Road signalled junction with A2022 Winkworth Road (Banstead crossroads) - A217 Brighton Road signalled roundabout to Bonsor Drive (Tadworth roundabout) northbound approach - A217 Belmont Rise roundabout junction with B2230 Brighton Road - B290 Station Approach signalled junction with B2220 Tadworth Street - A2022 Winkworth Road roundabout junction with B2218 <p><i>Links</i></p> <ul style="list-style-type: none"> - A217 Belmont Rise - B2230 Brighton Road - B2220 Tadworth Street - Shelveys Way
<p>Preston/Tattenhams</p> <p><i>Junctions:</i></p> <ul style="list-style-type: none"> - A240 Reigate Road signalled junction with A2022 Fir Tree Road (Driftbridge) <p><i>Links</i></p> <ul style="list-style-type: none"> - A2022 Fir Tree Road - A240 Reigate Road - B2221 Great Tattenhams/Tattenham Way
<p>A23 Corridor (Merstham/Redhill/Horley)</p> <p><i>Junctions:</i></p> <ul style="list-style-type: none"> - A23 Brighton Road signalled junction with Star Lane - A23 Brighton Road priority junction with Dean Lane - A23 Horley Road junction with Three Arch Road and Maple Road (Three Arch Road/East Surrey Hospital junction) - A23 London Road South junction with School Hill - A23 Brighton Road roundabout junction with B2036 Balcombe Road (Chequers roundabout) <p><i>Links:</i></p> <ul style="list-style-type: none"> - A23 London Road South - A23 Brighton Road - A23 Horley Road - A23 London Road - B2036 Balcombe Road
<p>A217 Corridor (Reigate)</p> <p><i>Junctions:</i></p> <ul style="list-style-type: none"> - A217 Brighton Road signalled approach arm to the M25 J8 grade separated junction - A217 Reigate Hill priority junction with Wray Lane - A217 Dovers Green Road signalled junction with Woodhatch Road and Prices Lane (Woodhatch/Angel crossroads) <p><i>Links:</i></p> <ul style="list-style-type: none"> - A217 north and south of the town - A217 Cockshot Hill - A2044 Woodhatch Road
<p>Redhill-Reigate Corridor (inc. A25 Corridor)</p> <p><i>Links:</i></p> <ul style="list-style-type: none"> - A25 Bancroft Road - A25 Reigate Road - A25 West Street - A25 Nutfield Road - A25 Redstone Hill - Linkfield Lane - A242 Croydon Road/Gatton Park Road - Cormongers Lane
<p>Horley</p> <p><i>Junctions:</i></p> <ul style="list-style-type: none"> - Victoria Road junction with Massetts Road <p><i>Links:</i></p> <ul style="list-style-type: none"> - C64 Massetts Road - Lee Street

Annex 3: Potential Sustainable Urban Extension sites: Transport impacts, considerations and interventions

The table below sets out the highway and wider transport considerations which will need to be taken into account should the potential sustainable urban extensions sites identified in the DMP Regulation 18 consultation document be allocated in the final DMP. The specific considerations and detailed improvements/interventions have been identified taking into account the findings of the 2016 Reigate & Banstead Local Plan Transport Assessment, analysis of local travel patterns (both commuting and to access local services) and knowledge of the transport facilities available in each location.

The information is intended to inform policy/mitigation requirements to be included alongside any future site allocations in the Development Management Plan. It is not necessarily an exhaustive list but will act as a guide for the issues which should be addressed within the transport assessments prepared by developers to accompany any future planning applications.

Location	Site ref	Key routes/links*	Relevant current strategic projects	Local/site specific improvements and considerations				
				Public transport	Walking	Cycling	Local highway/traffic considerations	Site access considerations
East Redhill	ERM1	To/from: <ul style="list-style-type: none"> Redhill station (walk/cycle) Redhill town centre (walk/cycle) Reigate town centre (cycle/bus) East Surrey Hospital (bus/cycle) Warwick School (walk/cycle) 	Redhill LSTF Redhill Balanced Network Greater Redhill STP1	Local improvements to existing bus infrastructure/passenger facilities on Nutfield Road	Improvement and extension of pedestrian/cycle facilities (including new footways) on Nutfield Road (southern side) North/south high quality pedestrian and cycle routes as integral part of design Safe pedestrian/cycle links and crossing points to access FP102 Improvements to FP530 (adjacent to Redstone Hollow).	Measures to manage effects and improve safety on rural and minor roads (such as Cormongers Lane/Fuller Wood Road)	Safe highway access onto Nutfield Road to be co-ordinated across all three sites	Sustainable transport measures to promote and enable walking and cycling for short journeys (to school/Redhill town centre)
	Upgrading of off-carriageway pedestrian/cycle routes to Redhill town centre, particularly FP102 (existing footpath east of Redstone Park)							
	Additional north/south high quality pedestrian and cycle routes through site as integral part of design, linking to Cavendish Rd Improvements to FP530 (adjacent to Redstone Hollow)							
East Merstham	ERM4	To/from: <ul style="list-style-type: none"> Merstham station (walk/cycle) Redhill town centre (bus/cycle) Reigate town centre (bus/cycle) East Surrey Hospital (bus/cycle) 	Redhill LSTF Greater Redhill STP2	Local improvements to existing bus infrastructure/passenger facilities on Bletchingley Road	Improvement and extension of pedestrian facilities (including new footways) on Bletchingley Road (southern side) Upgrading of BW119 (existing bridleway running through site) Upgrading of off-carriageway pedestrian/cycle routes to the local centre and Merstham Station, including FP93	Potential need to address School Hill/A23 junction (see further investigation)	Co-ordinated, safe highway access onto Bletchingley Road	School Hill/A23 junction Developers to carry out feasibility study, and where necessary contribute to any improvements and interventions, required to mitigate the impact of additional traffic on A23/School Hill
	Improvement and extension of pedestrian facilities (including new footways) on Bletchingley Road (northern side) Upgrading of FP198 (existing footpath running through site) Upgrading of off-carriageway pedestrian/cycle routes to the local centre and Merstham Station, including FP93							
South West Reigate	SSW2	To/from: <ul style="list-style-type: none"> Reigate station/town centre (walk/cycle) East Surrey Hospital (walk/cycle) Redhill town centre (bus/cycle) Dovers Green School (walk/cycle) Reigate School (walk/cycle) 	Redhill TravelSMART Greater Redhill STP1 and 2 (Eol) Reigate Transport Package (Eol)	Local improvements to existing bus infrastructure/passenger facilities on Sandcross Lane and Dovers Green Road Measures to maximise accessibility of bus routes to new and existing residents	Upgrading of off-carriageway cycle routes to the local centre (Prices Lane)	Potential need to address Prices Lane/A217 Dovers Green Road (see further investigation) Improvements to Dovers Green Road/Sandcross Lane junction Improvements to Slipshatch Road/Sandcross Lane junction Measures to manage effects and improve safety on rural and minor roads (such as Slipshatch Lane)	Safe highway access onto Slipshatch Road and Sandcross Lane	Woodhatch junction Developers to carry out feasibility study, and where necessary contribute to any improvements and interventions, required to mitigate the impact of additional traffic on, and improve safety for pedestrians/cyclists at Woodhatch junction.
	SSW7				Improvement and extension of pedestrian/cycle facilities (including new footways) on Dovers Green Road (eastern side) Improvement and extension of pedestrian/cycle facilities on Lonesome Lane (route to Dovers Green School) Safe pedestrian/cycle crossing points over Dovers Green Road and Lonesome Lane Upgrading of BW61 (existing bridleway through site) (SSW9)		Safe highway access onto Castle Drive	
	SSW9				Upgrading of cycle facilities on Balcombe Road (to Horley town centre)		Safe primary highway access onto Dovers Green Road	
Horley	NWH1	To/from: <ul style="list-style-type: none"> Horley town centre (walk/cycle) Gatwick airport (bus/cycle) Redhill town centre (bus/cycle) Oakwood School/Langshott School (walk/cycle) 	Greater Redhill STP2 (Eol)	None	Upgrading of FP409 (existing footpath through site)	No major impact	Safe highway access onto Bonehurst Road	Integration of northern sites (particularly NWH2) with Horley North West Sector transport infrastructure and amenities
	NWH2			Measures to ensure appropriate integration and access to proposed NWS bus routes	Measures to ensure integration and access to North West Sector local amenities Upgrading of FP410 (existing footpath on boundary of site)	Measures to manage effects/minimise traffic on Meath Green Lane	Primary highway access via North West Sector access routes Restricted access onto Meath Green Lane	
	SEH4			Local improvements to existing bus infrastructure/passenger facilities on Balcombe Road.	Upgrading of cycle facilities on Balcombe Road (to Horley town centre)	Mo major impact	Improved highway access via The Close onto Balcombe Road, including appropriate junction improvements	

*Derived from local knowledge of how residents within the areas access key facilities (e.g. schools/local shops) as well as analysis of travel to work patterns (location and mode) at MSOA level (Census 2011, see <http://commute.datashine.org.uk/>)

Annex 3: Potential Sustainable Urban Extension sites: Initial Utilities Reinforcements

The table below sets out the water supply network reinforcements which have been identified, at this initial stage, by Sutton and East Surrey Water in respect of the potential urban extension sites identified in the DMP Regulation 18 consultation document. The reinforcements have been identified based on modelling of the impact of new developments on supply pressures and flows in the locality.

Location	Site ref	Reinforcement required?	Length of reinforcement (metres)	Road	Type of reinforcement	New assets?	Notes
East Redhill	ERM1	Yes	750	Nutfield Road	To be confirmed	Yes	Considered in the context of future resilience to Redhill town centre. A new connection to the trunk main network will be required and it is likely that new district meters (DMs) and pressure reducing valves (PRVs) will also be necessary. The equivalent of a 180mm reinforcement will be required but detail will need to be confirmed when development plans are finalised.
	ERM2						
	ERM3						
East Merstham	ERM4	Yes	600	Bletchingley Road	Reinforcement of existing 3" cast iron (CI) main to 125mm polyethylene (PE)	No	None
	ERM5						
South West Reigate	SSW2	Yes	375	Sandcross Lane	Reinforcement of existing 3" CI main to 125mm PE	No	Reinforcement depends upon location of proposed connections.
		Yes	620	Prices Lane	Reinforcement of existing 3" CI main to 125mm PE	No	
	SSW7	Yes	720	Dovers Green Road	Reinforcement of existing 4" CI main to 125mm PE	No	SSW7 alone would not require reinforcement. Cumulative impact requires reinforcement.
	SSW9						
South Horley	SEH4	No	N/A				Assumed connection onto Haroldslea Drive
North West Horley	NWH1	Yes	3000	Meath Green Lane	Reinforcement of existing 3" CI main to 250mm ductile iron (DI)	Yes	Reinforcements already required as a result of the North West Sector development (1,510 homes). Resilience of supply to Horley/Gatwick is a factor and has informed the proposed design.
	NWH2	No	N/A				Assumed connection onto 100mm DI main outside Chequers service station

Source: Sutton and East Surrey Water