

Infrastructure Matrix

BANES MoD site concept statements 2012

B&NES MoD Concept Statement: Infrastructure Matrix

Status: Consultation draft
Control date: April 2012

Purpose & Scope

The purpose of this matrix is to systematically identify the different infrastructure requirements for each of the three development sites. This will form part of the evidence base behind the Council's Concept Statements which are designed to guide the sale and planning decisions for three Ministry Of Defence sites in and around Bath.

This should be seen as an initial guide which has been prepared using the assumptions listed below and the information available at the time of drafting. It is to be used as an evidence base to help facilitate debate at public consultation. It is not necessarily a definitive list and should not be used as such.

The mix of development outlined below is an assumption based on the methodology for assessing large sites contained in the Strategic Housing Land Availability Assessment (SHLAA¹). The purpose of this is to anticipate how many people overall, and how many children, could be generated by the developments. These figures feed into established formulas in the Councils adopted Planning Obligations Supplementary Planning Document² (SPD). The SPD is used to establish the level of financial contributions secured from developers to mitigate the impact of new development. The mix of development is purely indicative at this stage and is not necessarily the Councils expectation for the sites.

The assessment is based on the current planning obligations (also known as 'section 106') regime. The Council has recently begun consultation on a preliminary draft charging schedule for a Community Infrastructure Levy³ (CIL). The final CIL charging schedule is anticipated to be adopted by the Council in September 2013. As such, the conclusions reached by this document may be subject to change in the future.

¹ [http://www.bathnes.gov.uk/SiteCollectionDocuments/Environment%20and%20Planning/Planning/planning%20policy/SHLAA/SHLAA%20May%202011%20-%20Report%20of%20Findings%20\(BathNES\).pdf](http://www.bathnes.gov.uk/SiteCollectionDocuments/Environment%20and%20Planning/Planning/planning%20policy/SHLAA/SHLAA%20May%202011%20-%20Report%20of%20Findings%20(BathNES).pdf)

² <http://www.bathnes.gov.uk/environmentandplanning/planning/planningpolicy/localdevelopmentscheme/Pages/obligationsspd.aspx>

³ <http://www.bathnes.gov.uk/environmentandplanning/planning/planningpolicy/localdevelopmentscheme/Pages/cil.aspx>

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Assumptions

Foxhill:

- 700 dwellings
- Indicative housing mix of: 70 x 2 bed flats, 70 x 3+ bed flats, 140 x 2 bed houses, 175 x 3 bed houses, 175 x 4 bed houses, 70 x 5+ bed houses
- Generating 1610 people, including 323 children of primary and secondary school age

Ensleigh:

- 350 dwellings
- Indicative housing mix of: 35 x 2 bed flats, 35 x 3+ bed flats, 70 x 2 bed houses, 88 x 3 bed houses, 87 x 4 bed houses, 35 x 5+ bed houses
- Generating 805 people, including 162 children of primary and secondary school age

Warminster Road:

- 140 dwellings
- Indicative housing mix of: 14 x 2 bed flats, 14 x 3+ bed flats, 28 x bed houses, 35 x 3 bed houses, 35 x 4 bed houses, 14 x 5+ bed houses
- Generating 322 people, including 65 children of primary and secondary school age

The B&NES Planning Obligations SPD (Adopted July 2009) assumes that (for the purposes of calculating the number of people generated by a development) that an occupancy rate of 2.3 people per dwelling provides a reasonable average.

The estimate of children of primary and secondary school age is calculated using table 2.2.3 of the B&NES Planning Obligations SPD.

SECTION 1: SITE BY SITE REQUIREMENTS AT A GLANCE

FOXHILL	Requirements
<p>Transport</p>	<ul style="list-style-type: none"> • Two permanent points of vehicular access as follows: a primary access via a new mini-roundabout junction with the A3062 Bradford Road; and a secondary vehicular access point onto Fox Hill. • The connecting road between these access points should be aligned such that no part of the site is more than a 6 minute walk from this loop. • Improvements to the A3062 Bradford Road/Fox Hill Road junction will be required. • The North Road/Ralph Allen Drive junction will also require upgrading from its current major-minor to improve capacity. • Additional traffic calming measures on Bradford Road/North Road between Fox Hill and Ralph Allen Drive will be required as off-site works • Any wider highways improvements as identified in the transport assessment accompanying a planning application • Changes to the routing of Service 13 to run within the site using the proposed loop road linking the primary and secondary vehicular access points. • Bus stops along this loop road would need to be spaced at c.400m intervals and provided with raised kerbs, suitable bus waiting shelters and Real Time Information (RTI) displays (or funding provision allowed for) and an electrical supply. These stops will need to be Bath Transport Package specifications. • Extending the existing Service 13 route will result in increased operating costs; therefore financial support would be sought from the developer for a five year period to ensure that an adequate service is in place as and when the initial phase of housing is first occupied. • A contribution towards interim support for Service 1 would be sought from the developer for a fixed period to maintain its provision until such time as the new housing is substantially complete. • Services 20A and 20C are presently underpinned by additional funding secured from Sainsbury's under a Section 106 agreement. This additional service element has a cost to the Council of circa £60,000 per annum at 2011/12 prices. The Council would thus seek to secure additional Section 106 contributions from the potential Foxhill developer in order to extend the life of this additional service element, potentially for a further three years. • Signing/lighting improvements to the existing linkage between Fox Hill and Perrymead to the north of the site.

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	<ul style="list-style-type: none"> • Pedestrian footpath connections to Popes Walk on the eastern boundary of the site. • Improvements to allow shared pedestrian/cyclist use on the section of Popes Walk between the south-east corner of the site and the North Road/Ralph Allen Drive junction. • The Council are promoting a cycle linkage between North Road and Claverton Down Road through Rainbow Wood to improve access between Combe Down and Bath University. A contribution to the funding of this link would be sought to promote sustainable travel from the site.
Sports	<ul style="list-style-type: none"> • Financial contributions towards Swimming pool, Synthetic Turf Pitch and Changing Accommodation
Education	<ul style="list-style-type: none"> • 1x Single Form Entry Primary School on site (unless suitable alternative provision can be made) • 1x Early Years facility on site • Financial contributions required for Youth Services as per Planning Obligations SPD
Health	<ul style="list-style-type: none"> • New Primary Health Care Facility
Play Services	<ul style="list-style-type: none"> • Financial contributions to play provision • Play areas to be provided through provision of an integration of playable landscape and equipment
Green Infrastructure	<ul style="list-style-type: none"> • Formal open space: 2.8 ha (and management and maintenance contribution) including children's play space • Natural areas: 2.8 ha (natural areas in proximity to the site could absorb demand if this can be demonstrated to properly meet needs and secure long term protection, management and enhancement of these natural areas) • Allotments: 0.56 ha • Site is adjacent to the Cotswolds AONB and c.200m from the nearest component of Bath and Bradford on Avon Bat SAC.
Flood Mitigation	<ul style="list-style-type: none"> • A Flood Risk Assessment is required as the site is over 1HA in Flood Zone 1. • Sustainable urban drainage is required to mitigate runoff into catchment.
Life Long Learning	<ul style="list-style-type: none"> • Financial contribution to libraries
Utilities	
<ul style="list-style-type: none"> • Wales and West Utilities 	<ul style="list-style-type: none"> • New Medium Pressure main to site before, subsequently reduced to Low Pressure. Low Pressure connection points are available closer to the site but reinforcement would be required to support the load.
<ul style="list-style-type: none"> • Wessex Water: 	<ul style="list-style-type: none"> • <u>Foul drainage</u> - Site to be served by separate systems of on-site drainage provided by the developer. Engineering appraisal will determine the nature and scope of any improvements required downstream to mitigate against the increase risk in sewer flooding caused by additional flows. Developer to contribute to the cost of appraisal and any resultant capacity improvements.

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	<ul style="list-style-type: none"> • <u>Surface water drainage</u> - Use of SUDs should be investigated. There are public water sewers in the vicinity of the site. There will be no increase in flow rate to these surface water sewers over any current flow rate permitted. • <u>Water supply</u> - Network modelling will need to be undertaken to determine whether network reinforcement is required. Developer to contribute to cost of reinforcement.
<ul style="list-style-type: none"> • Western Power Distribution 	<ul style="list-style-type: none"> • Site has high voltage connection to the Western Power Distribution (WPD) network and is signed up for a considerable amount of import capacity. Ability to supply the proposed load would depend on the heating arrangements and whether the development will be heated by electric or gas appliances. If heated by gas then WPD are reasonably confident that the existing infrastructure would be able to support the development without excessive reinforcement or alteration. WPD cannot commit to any arrangements until provided with detailed load estimates, site plans, etc.

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ENSLEIGH	Requirements
Transport	<ul style="list-style-type: none"> • Two points of permanent vehicle access would be required as follows: a primary access achieved via a new roundabout junction with Lansdown Road, most likely located where the existing secondary access to the MOD site is now; and a secondary access onto Granville Road. • Appropriate treatment of the Lansdown Road/Granville Road junction will need to be considered in the off-site highway works. • Improvements to Lansdown Road/Richmond Road/St Stephens Road junction • Any wider highways improvements as identified in the transport assessment accompanying a planning application • Financial contributions to pedestrian and cyclist improvements currently being investigated along the section of Lansdown Road between Granville Road and Richmond Road. • Cycle improvements to take the form of on-carriageway mandatory or advisory cycle lane provision where sufficient width exists and a meaningful length of provision can be achieved. • Extension of service route of Service 2 into the site to achieve better public transport access. As such, a loop road or turnaround facility will need to be accommodated in the internal layout. • Bus stops should be provided at approximately 400m intervals along this loop. • All bus stops will require raised kerbs, bus shelters and Real Time Information (RTI) displays (including power supplies); and in addition bus stop 'Clearway' markings will be needed at all stops to prevent obstruction by on-street parking. • Financial contributions towards providing service enhancement to Service 2 for a period of 5 years.
Sports	<ul style="list-style-type: none"> • Financial contributions towards Swimming pool, Synthetic Turf Pitch and Changing Accommodation
Education	<ul style="list-style-type: none"> • 1x Primary School (potentially on site; however, off site provision will be considered) • Financial contributions required for Youth Services as per Planning Obligations SPD
Health	<ul style="list-style-type: none"> • Potential contributions to health care provision
Play Services	<ul style="list-style-type: none"> • Contributions to play provision
Green Infrastructure	<ul style="list-style-type: none"> • Formal open space 1.5 ha (and management and maintenance contribution) including children's play space • Allotments 0.3 ha • Site effectively surrounded by Cotswolds AONB and forms part of the Kingswood School Playing Field local SNCI.
Flood Mitigation	<ul style="list-style-type: none"> • A Flood Risk Assessment is required as the site is over 1HA in Flood Zone 1. • Sustainable urban drainage is required to mitigate runoff into catchment.

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Life Long Learning	<ul style="list-style-type: none"> Financial contribution to libraries
Utilities	
<ul style="list-style-type: none"> Wales and West Utilities Wessex Water: 	<ul style="list-style-type: none"> Low Pressure network reinforcement required. <u>Foul drainage</u> - site to be served by separate systems of on-site drainage provided by the developer. Engineering appraisal will determine the nature and scope of any improvements required downstream to mitigate against the increased risk in sewer flooding caused by additional flows. Developer to contribute to the cost of appraisal and any resultant capacity improvements. <u>Surface water drainage</u> - Use of SUDs should be investigated. There is a 300mm diameter public surface water sewer in Granville Road. There will be no increase in flow rate to this surface water sewer over any current flow rate permitted. <u>Water supply</u> - there are issues with water pressure in the vicinity of the site. Network modelling will need to be undertaken to determine the nature of off site reinforcement to ensure adequate pressure is available for the development without adversely affecting existing customers. Developer to contribute to cost of <u>reinforcement</u>.
<ul style="list-style-type: none"> Natural England 	<ul style="list-style-type: none"> Landscape character to underpin preparation of concept statement as site effectively surrounded by Cotswold AONB. AONB Management Plan and Landscape Character Assessment should inform design. Site forms part of Kingswood School Playing Field local SNCI, designated for its unimproved calcareous grassland, a rare national and local priority habitat.
<ul style="list-style-type: none"> Western Power Distribution 	<ul style="list-style-type: none"> Site has high voltage connection to the Western Power Distribution (WPD) network and is signed up for a considerable amount of import capacity. Ability to supply the proposed load would depend on the heating arrangements and whether the development will be heated by electric or gas appliances. If heated by gas then WPD are reasonably confident that the existing infrastructure would be able to support the development without excessive reinforcement or alteration. WPD cannot commit to any arrangements until provided with detailed load estimates, site plans, etc.

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WARMINSTER ROAD	Requirements
Transport	<ul style="list-style-type: none"> • The access arrangements considered necessary are as follows: a primary access achieved via a new roundabout junction with the A36 Warminster Road sited just east of the existing exit from the MOD site; and a secondary emergency vehicular access onto Warminster Road where the existing entrance to the site is now. • The internal arrangement of roads should ensure that vehicles within the site can access both the main access and the secondary emergency linkage should circumstances dictate. • The Highways Agency wish to work with developer of this site so that any impact on the A36 Trunk Road can be fully considered and addressed at an early stage. • The creation of a new pedestrian/cyclist link through the site linking the A36 with the National Cycle Route along the Avon and Kennet Canal towpath. A new bridge would be needed over the canal with access to/from the towpath suitable for cyclists and the disabled. • Improvements to the existing footpath along the eastern perimeter of the site linking the A36 with an existing footbridge over the canal. A linkage with the pedestrian footway/footpath network within the proposed site would need to be provided. • A pedestrian access/link on the western boundary to the site to the adjacent primary school in Darlington Road. This would be best achieved by using the existing path linking to the eastern end of Darlington Road. • Installation of new pedestrian refuge islands on the A36 Warminster Road where the footpath links from Minster Way and St Christopher's Close join this road. • Services 264/265 operate Wiltshire's TRAPEZE RTI system, so financial contributions would be sought with a view to further equipping these services with VIX equipment so that the stop displays outside the site provide predictions for these services.
Sports	<ul style="list-style-type: none"> • Financial contributions towards Swimming pool, Synthetic Turf Pitch and Changing Accommodation
Education	<ul style="list-style-type: none"> • Potential space required for expansion of adjacent school - contribution equivalent to one classroom • Financial contributions required for Youth Services as per Planning Obligations SPD
Health	<ul style="list-style-type: none"> • Potential contributions to health care provision
Play Services	<ul style="list-style-type: none"> • Contributions to play provision
Life Long Learning	<ul style="list-style-type: none"> • Financial contribution to libraries
Green Infrastructure	<ul style="list-style-type: none"> • Formal open space 0.53 ha (and management and maintenance contribution) including children's

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	<ul style="list-style-type: none"> play space Natural areas 0.53 ha Allotments 0.11 ha Site in close proximity to Kennet & Avon Canal and c.200m from the Cotswolds AONB.
Flood Mitigation	<ul style="list-style-type: none"> A Flood Risk Assessment is required as the site is over 1HA in Flood Zone 1. Sustainable urban drainage is required to mitigate runoff into catchment.
Utilities	
<ul style="list-style-type: none"> Wales and West Utilities 	<ul style="list-style-type: none"> Reinforcement of the nearest Low Pressure main would be required for the load. Medium Pressure is available locally and may be able to support this.
<ul style="list-style-type: none"> Wessex Water: 	<ul style="list-style-type: none"> <u>Foul drainage</u> - Site to be served by separate systems of on-site drainage provided by the developer. Site currently served locally by a 100mm diameter public foul sewer which will not have the capacity for 140 dwellings so requires upsizing. Engineering appraisal will determine the nature and scope of any improvements required downstream to mitigate against the increase risk in sewer flooding caused by additional flows. Developer to contribute to the cost of appraisal and any resultant capacity improvements. <u>Surface water drainage</u> - Upon redevelopment assumption that developer will utilise SUDs arrangements and possible discharge to the canal with approval from the LPA and British Waterways. <u>Water supply</u> - site currently served from the water main to east and pumps via an MoD private booster station to a private water tower within site. Network modelling will need to be undertaken to determine whether network reinforcement is required. Developer to contribute to cost of reinforcement.
<ul style="list-style-type: none"> British Waterways 	<ul style="list-style-type: none"> Site in close proximity to Kennet & Avon Canal and development has the potential to increase usage, and therefore maintenance costs. The impact should be properly assessed and if necessary mitigated by the developer.
<ul style="list-style-type: none"> Highways Agency 	<ul style="list-style-type: none"> Wish to work with developer of this site so that any impact on the A36 Trunk Road can be fully considered and addressed.
<ul style="list-style-type: none"> Western Power Distribution 	<ul style="list-style-type: none"> Site has high voltage connection to the Western Power Distribution (WPD) network and is signed up for a considerable amount of import capacity. Ability to supply the proposed load would depend on the heating arrangements and whether the development will be heated by electric or gas appliances. If heated by gas then WPD are reasonably confident that the existing infrastructure would be able to support the development without excessive reinforcement or alteration. WPD cannot commit to any arrangements until provided with detailed load estimates, site plans, etc.

SECTION 2: DETAILED EVIDENCE BASE BY TOPIC

EDUCATION																																														
Policy Context	<ul style="list-style-type: none"> Adopted Local Plan Policies IMP.1 & CF.3 Draft Core Strategy Policy CP13 B&NES Planning Obligations SPD B&NES Secondary Schools Reorganisation 2006-2010 B&NES Primary School Review (Overview & Scrutiny Panel) 25 Jan 2010 B&NES Childcare Sufficiency Report (Children's Services) for early years 																																													
Basis of need & availability of evidence for the service	<p>Early Years</p> <ul style="list-style-type: none"> The Planning Obligations SPD states that the determination of whether or not there is sufficient Early Years provision in the area of the development will be done via reference to the Childcare Sufficiency Report and an assessment of the impact of the development on existing capacity. If capacity is exceeded then the Council will require resources to provide additional capacity. Calculations are based on national take up rates for Early Years services – 20% for children aged 0-2 and 95% of children aged 3-4. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="3"></th> <th colspan="6">Number of Bedrooms</th> </tr> <tr> <th colspan="2">Flats</th> <th colspan="4">Houses</th> </tr> <tr> <th>2</th> <th>3+</th> <th>2</th> <th>3</th> <th>4</th> <th>5+</th> </tr> </thead> <tbody> <tr> <td>Early Years Children age 0-2 (20% take up rate) per dwelling</td> <td>0.0144</td> <td>0.0216</td> <td>0.0288</td> <td>0.0432</td> <td>0.0468</td> <td>0.0384</td> </tr> <tr> <td>Early Years Children age 3-4 (95% take up rate) per dwelling</td> <td>0.0456</td> <td>0.0684</td> <td>0.0912</td> <td>0.1368</td> <td>0.1482</td> <td>0.1216</td> </tr> <tr> <td>All Early Years Children per</td> <td>0.06</td> <td>0.09</td> <td>0.12</td> <td>0.18</td> <td>0.195</td> <td>0.16</td> </tr> </tbody> </table>							Number of Bedrooms						Flats		Houses				2	3+	2	3	4	5+	Early Years Children age 0-2 (20% take up rate) per dwelling	0.0144	0.0216	0.0288	0.0432	0.0468	0.0384	Early Years Children age 3-4 (95% take up rate) per dwelling	0.0456	0.0684	0.0912	0.1368	0.1482	0.1216	All Early Years Children per	0.06	0.09	0.12	0.18	0.195	0.16
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dwelling						
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Primary & Secondary Schools

- Planning Obligations SPD (2009) estimate of school places (primary and secondary) generated by residential development:

	Number of Bedrooms					
	Flats		Houses			
	2	3+	2	3	4	5+
Primary school pupils per dwelling	0.04	0.30	0.09	0.30	0.46	0.65
Secondary school pupils per dwelling	0	0	0.03	0.14	0.27	0.46
All Primary & Secondary pupils per dwelling	0.04	0.30	0.12	0.44	0.73	1.11

- A new primary school will be a minimum of 210 places.

Secondary Schools & post-16 provision

- In Bath, current projections indicate that there will be sufficient secondary and sixth form capacity available for a number of years to accommodate pupils generated by the housing development planned for the city as outlined in the Core Strategy. This will continue to be monitored. If the situation changes in the future, financial contributions may be required.

Special Education Needs (SEN)

- The SPD states that existing special school provision is sufficient to meet the needs of the current population only. A financial contribution is required from every new dwelling that generates primary, secondary or post 16 pupils. Calculations are based on the percentage of pupils in B&NES who have SEN (currently 2.12%) and the percentage of these pupils requiring special school provision (39%). However, this section of the SPD is currently under review by the Council. Financial contributions therefore may be required.

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	<p>Youth Services Provision</p> <ul style="list-style-type: none"> Existing youth services provision is sufficient to meet the needs of the current population only. A financial contribution is required from every new dwelling of 2 beds or more. This contribution covers the 13-19 age group. 																																																																
<p>Proposed provision / capital requirements on site & Options considered)</p>	<p><u>Early Years: Places Required</u></p> <ul style="list-style-type: none"> The Infrastructure Delivery Plan (2011) states that the redevelopment of MOD Foxhill will trigger the need for a new early years facility on site to be required in the early stages of development. <table border="1" data-bbox="696 544 1861 850"> <thead> <tr> <th>Houses</th> <th>Number of units</th> <th colspan="2">Potential Child Yield (Early years)</th> </tr> </thead> <tbody> <tr> <td>2 bed</td> <td>140</td> <td>X 0.12</td> <td>4.8</td> </tr> <tr> <td>3 bed</td> <td>175</td> <td>X 0.18</td> <td>31.5</td> </tr> <tr> <td>4 bed</td> <td>175</td> <td>X 0.195</td> <td>34.125</td> </tr> <tr> <td>5+ bed</td> <td>70</td> <td>X 0.16</td> <td>11.2</td> </tr> <tr> <td>Flats, Maisonettes, etc.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 bed</td> <td>70</td> <td>X 0.06</td> <td>4.2</td> </tr> <tr> <td>3+ bed</td> <td>70</td> <td>X 0.09</td> <td>6.3</td> </tr> <tr> <td>Total number of units</td> <td>700</td> <td>Total Child Yield</td> <td>92</td> </tr> </tbody> </table> <p><u>Primary school places required</u></p> <ul style="list-style-type: none"> Foxhill: 215 – New school required on site. This is likely to be required in the early stages of the development in order to accommodate the children from the new housing as they appear. <table border="1" data-bbox="696 1082 1861 1319"> <thead> <tr> <th>Houses</th> <th>Number of units</th> <th colspan="2">Potential Child Yield (Primary age)</th> </tr> </thead> <tbody> <tr> <td>2 bed</td> <td>140</td> <td>X 0.09</td> <td>12.6</td> </tr> <tr> <td>3 bed</td> <td>175</td> <td>X 0.3</td> <td>52.5</td> </tr> <tr> <td>4 bed</td> <td>175</td> <td>X 0.46</td> <td>80.5</td> </tr> <tr> <td>5+ bed</td> <td>70</td> <td>X 0.65</td> <td>45.5</td> </tr> <tr> <td>Flats, Maisonettes, etc.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 bed</td> <td>70</td> <td>X 0.04</td> <td>2.8</td> </tr> </tbody> </table>	Houses	Number of units	Potential Child Yield (Early years)		2 bed	140	X 0.12	4.8	3 bed	175	X 0.18	31.5	4 bed	175	X 0.195	34.125	5+ bed	70	X 0.16	11.2	Flats, Maisonettes, etc.				2 bed	70	X 0.06	4.2	3+ bed	70	X 0.09	6.3	Total number of units	700	Total Child Yield	92	Houses	Number of units	Potential Child Yield (Primary age)		2 bed	140	X 0.09	12.6	3 bed	175	X 0.3	52.5	4 bed	175	X 0.46	80.5	5+ bed	70	X 0.65	45.5	Flats, Maisonettes, etc.				2 bed	70	X 0.04	2.8
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3+ bed	70	X 0.3	21
Total number of units	700	Total Child Yield	215

- **Ensleigh: 107** – New school required, potentially on site in the early stages of the development in order to accommodate the children from the new housing as they appear. The remainder of the new housing that is intended for the central and river corridor area of Bath as outlined in the Core Strategy will also require the provision of more primary school places. Consequently it may be prudent to consider alternative options to on site provision, namely reuse of Hope House which lies in the north of the city (a surplus to requirements private school which is currently on the market).

Houses	Number of units	Potential Child Yield (Primary age)	
2 bed	70	X 0.09	6.3
3 bed	88	X 0.3	26.4
4 bed	87	X 0.46	40.02
5+ bed	35	X 0.65	22.75
Flats, Maisonettes, etc.			
2 bed	35	X 0.04	1.4
3+ bed	35	X 0.3	10.5
Total number of units	350	Total Child Yield	107

- **Warminster Rd: 43** - potential space required for expansion of adjacent school

Houses	Number of units	Potential Child Yield (Primary age)	
2 bed	28	X 0.09	2.52
3 bed	35	X 0.3	10.5
4 bed	35	X 0.46	16.1
5+ bed	14	X 0.65	9.1
Flats, Maisonettes, etc.			
2 bed	14	X 0.04	0.56
3+ bed	14	X 0.3	4.2
Total number of units	140	Total Child Yield	43

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- Note: Many of the existing primary schools in Bath have limited capacity for extension or expansion as the sites they occupy are too small to facilitate to meet the scope of the growth requirements.

Youth Services Provision

- Based on the indicative housing mix the Planning Obligations SPD would seek the following contributions for all three sites (using Table 2.2.4 of the SPD):

Foxhill

Houses	Number of units	£ per dwelling	Contribution (£)
2 bed	140	X 200.10	£28,014
3 bed	175	X 200.10	£35,017.5
4 bed	175	X 200.10	£35,017.5
5+ bed	70	X 200.10	£14,007
Flats, Maisonettes, etc.			
2 bed	70	X 0	£0
3+ bed	70	X 0	£0
Total number of units	700	Total	£112,056

Ensleigh

Houses	Number of units	£ per dwelling	Contribution (£)
2 bed	70	X 200.10	£14,007
3 bed	88	X 200.10	£17,608.8
4 bed	87	X 200.10	£17,408.7
5+ bed	35	X 200.10	£7,003.5
Flats, Maisonettes, etc.			
2 bed	35	X 0	£0
3+ bed	35	X 0	£0
Total number of units	350	Total	£56,028

Warminster Rd

Infrastructure Matrix
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	Houses	Number of units	£ per dwelling	Contribution (£)
	2 bed	28	X 200.10	£5,602.8
	3 bed	35	X 200.10	£7,003.5
	4 bed	35	X 200.10	£7,003.5
	5+ bed	14	X 200.10	£2,801.4
	Flats, Maisonettes, etc.			
	2 bed	14	X 0	£0
	3+ bed	14	X 0	£0
	Total number of units	140	Total	£22,411
Cost & funding source	<ul style="list-style-type: none"> • Where the development creates a requirement for a new on-site Early Years facility the developer will be expected to pay the full cost of construction and provide the site free of charge. • Where development creates a requirement for a new on-site school, the Planning Obligations SPD states that the developer will be expected to pay the full cost of construction and provide the site free of charge. • Where an existing off-site primary school is to be extended or upgraded, contributions will be calculated using the Planning Obligations SPD. 			

Infrastructure Matrix
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HEALTH	
Policy Context	<ul style="list-style-type: none"> • Adopted Local Plan Policies IMP.1 & CF.3 • Draft Core Strategy Policy CP13
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The Local Plan recognises that in certain circumstances there may be a need to provide for community, education and/or health facilities in association with new development proposals. Policy CF.3 states that where existing community facilities are inadequate to meet the needs of future residents of new development, planning permission will be refused unless additional provision, related in scale and kind to the proposed development, to meet those needs is made. • The Primary Care Trust (NHS B&NES) is analysing its demographical data in respect of the community the Primary Care Estate serves, reviewing travel distances, list sizes and GP practice localities to ascertain the sufficiency of provision of premises in the correct localities. This will also include a review of the utilisation of premises and is likely to identify a rationalisation of provision in order to fund the expansion and improvement of the premises identified. • NHS B&NES has provided information regarding developer contributions towards provision of local health facilities. Based on a target of 1,700 patients per GP a contribution will be sought where as a result of the development the projected list size of the local GP practice exceeds (or further exceeds) 1,700 patients per GP. • 1,700 new patients = requirement for 1 new GP. • 2.3 people per new dwelling = 739 dwellings per new GP (1,700/2.3) • 1 additional GP will require 95 square metres additional floorspace <p>Foxhill</p> <ul style="list-style-type: none"> • Foxhill is an area of relative deprivation within B&NES. These communities have higher health needs than the rest of the population. These communities do not always access health care as soon as they need them. Health facilities need to be outward looking and reach into the community. There are not any existing GP practices in this locality. • There is an opportunity to locate a new GP facility at Foxhill, potentially within an appropriately designed multifunctional building also containing the primary school and early years facility.
Proposed provision / capital requirements on site & Options considered)	<p>Foxhill</p> <ul style="list-style-type: none"> • 700 dwellings, generating 1,610 new people • Broadly speaking this generates the need for 1 additional GP on site. <p>Ensleigh</p>

Infrastructure Matrix
BANES MoD site concept statements 2012

	<ul style="list-style-type: none"> • 350 dwellings, generating 805 new people • Not enough new people for a new GP <p>Warminster Road</p> <ul style="list-style-type: none"> • 140 dwellings, generating 322 new people • Not enough new people for a new GP <ul style="list-style-type: none"> • Financial contributions may be sought for Ensleigh and Warminster Road to improve existing facilities.
Cost & funding source	<ul style="list-style-type: none"> • Where replacement, additional or enhanced facilities are required, the developer will be expected to make provision directly related in scale and kind to the need generated by the development. This can either be in the form of direct provision by the developer or where this is not possible or appropriate, in the form of a financial contribution.

Infrastructure Matrix
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GREEN INFRASTRUCTURE	
Policy Context	<ul style="list-style-type: none"> • B&NES Planning Obligations SPD • B&NES Local Plan Policy IMP.1 & SR.3 • Draft Core Strategy Policy CP13 • B&NES Green Space Strategy • Cotswolds AONB Management Plan and Landscape Character Assessment • Natural England's 'standards for accessible natural greenspace'
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • Planning Obligations SPD methodology • British Waterways response • Natural England's 'standards for accessible natural greenspace' (ANGSt) provides a set of benchmarks, which should be used to ensure new and existing housing has access to nature. • Natural England would encourage any proposal to incorporate measures to help encourage people to access the countryside for quiet enjoyment. Measures such as reinstating existing footpaths together with the creation of new footpaths and bridleways are to be encouraged. Links to other green networks or urban fringe areas should also be explored to help promote the creation of a wider green infrastructure.
Proposed provision / capital requirements on site & Options considered)	<p>Foxhill</p> <ul style="list-style-type: none"> • Formal open space 2.8 ha • Natural areas 2.8 ha (In principle, provision of the Natural areas off site may well be acceptable, particularly if there are opportunities adjacent). • Allotments 0.56 ha • Understanding and respecting landscape character at the Foxhill site will need to be key considerations as the north of the site is adjacent to the boundary of the Cotswolds AONB. • The site is located c.200m from the nearest component of Bath & Bradford on Avon Bat SAC, while other components lie to the west, east and south. The SAC designations apply to the mine entrances only; there are tunnels used by bats all over this area. • Disused Quarry Combe Down (Old Stone Mine SNCI, & Combe Down & Bathampton Down Mines SSSI) are within 200-300m of the MOD site. • Greater horseshoe bats, Bechstein's bat and lesser horseshoe bats - are afforded the highest level of protection under the provisions of the Conservation of Habitats and Species Regulations 2010 as well as the Wildlife and Countryside Act 1981.

**Infrastructure Matrix
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	<p>Ensleigh</p> <ul style="list-style-type: none"> • Formal open space 1.5 ha • Allotments 0.3 ha • It is anticipated that existing Natural space in proximity to the site could absorb demand from this development for access to natural space. • The site is effectively surrounded by the Cotswolds AONB, and Natural England would expect landscape character to underpin the development of the site. • The site forms part of Kingswood School Playing Field local SNCI, designated for its unimproved calcareous grassland, an increasingly rare national and local priority habitat. <p>Warminster Road</p> <ul style="list-style-type: none"> • Formal open space 0.53 ha • Natural areas 0.53 ha (In principle, provision of the Natural areas off site may well be acceptable, particularly if there are opportunities adjacent). • Allotments 0.11 ha • The site is in close proximity to the Kennet & Avon Canal. The addition of a large number of houses in this area may impact on the overall usage of the Canal towpath for walking/ cycling into the city centre and for easy access to the countryside for recreational purposes. The Council considers the waterway (meaning canal and river corridor) important as Green infrastructure. The development has the potential to increase usage, and therefore maintenance costs. The impact on the adjacent stretch of the canal should be properly assessed and if necessary mitigated by the developer. • Natural England consider that it will be important to ensure the important ecological function of the river is not compromised, for example, through the introduction of lighting to previously dark areas that could impact on commuting/foraging bats. • The site is approximately 200m from the Cotswolds AONB.
<p>Cost & funding source</p>	<ul style="list-style-type: none"> • If the above developments do not accommodate the areas of open space on site, then it would be expected that developers either provide suitable land and facilities off site or make financial contributions to enable the Council to implement the requirements. • Where green space is provided by the developer it must be maintained to the satisfaction of the Council for a period of no less than 12 months. Developers will then be required to demonstrate to the Council's satisfaction that the green space will be permanently maintained and managed (e.g. through a management company) or dedicate the green space and any associated facilities (e.g. changing facilities, play equipment, landscaping) to

Infrastructure Matrix
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	either the District or Parish Council and make a capital commuted contribution to cover their maintenance over a 10 year period.
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PLAY SERVICES																																									
Policy Context	<ul style="list-style-type: none"> B&NES Local Plan Policy IMP.1 B&NES Planning Obligations SPD Draft Core Strategy Policy CP13 																																								
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> B&NES Council is a Play Pathfinder Authority. The Planning Obligations SPD seeks financial contributions from developers towards Play Services which include Community Play Rangers, Holiday Play Schemes and Community Play Projects. These contributions are sought on the basis of the mitigation of impact on the Play Service which contributes to quality of use of the open spaces and is fairly and reasonably related to the scale of development. A contribution to play provision will be sought from all three sites in respect of children of <u>primary and secondary school age</u>. Planning Obligations SPD (2009) estimate of school places (primary and secondary) generated by residential development: <table border="1"> <thead> <tr> <th rowspan="3"></th> <th colspan="6">Number of Bedrooms</th> </tr> <tr> <th colspan="2">Flats</th> <th colspan="4">Houses</th> </tr> <tr> <th>2</th> <th>3+</th> <th>2</th> <th>3</th> <th>4</th> <th>5+</th> </tr> </thead> <tbody> <tr> <td>Primary school pupils per dwelling</td> <td>0.04</td> <td>0.30</td> <td>0.09</td> <td>0.30</td> <td>0.46</td> <td>0.65</td> </tr> <tr> <td>Secondary school pupils per dwelling</td> <td>0</td> <td>0</td> <td>0.03</td> <td>0.14</td> <td>0.27</td> <td>0.46</td> </tr> <tr> <td>All Primary & Secondary pupils per dwelling</td> <td>0.04</td> <td>0.30</td> <td>0.12</td> <td>0.44</td> <td>0.73</td> <td>1.11</td> </tr> </tbody> </table>		Number of Bedrooms						Flats		Houses				2	3+	2	3	4	5+	Primary school pupils per dwelling	0.04	0.30	0.09	0.30	0.46	0.65	Secondary school pupils per dwelling	0	0	0.03	0.14	0.27	0.46	All Primary & Secondary pupils per dwelling	0.04	0.30	0.12	0.44	0.73	1.11
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Proposed provision / capital requirements on site & Options	<ul style="list-style-type: none"> A contribution to play provision (using the methodology in the Planning Obligations SPD) will be sought from all three sites in respect of children of primary and secondary school age. 																																								

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considered)

- **Foxhill: 323 children** of primary and secondary school age

Houses	Number of units	Potential Child Yield (Primary and secondary school age)	
2 bed	140	X 0.12	16.8
3 bed	175	X 0.44	77
4 bed	175	X 0.73	127.75
5+ bed	70	X 1.11	77.7
Flats, Maisonettes, etc.			
2 bed	70	X 0.04	2.8
3+ bed	70	X 0.3	21
Total number of units	700	Total Child Yield	323

- **Ensleigh: 162 children** of primary and secondary school age

Houses	Number of units	Potential Child Yield (Primary and secondary school age)	
2 bed	70	X 0.12	8
3 bed	88	X 0.44	39
4 bed	87	X 0.73	64
5+ bed	35	X 1.11	39
Flats, Maisonettes, etc.			
2 bed	35	X 0.04	1.4
3+ bed	35	X 0.3	11
Total number of units	350	Total Child Yield	162

- **Warminster Rd: 65 children** of primary and secondary school age

Houses	Number of units	Potential Child Yield (Primary and secondary school age)	
2 bed	28	X 0.12	3.36
3 bed	35	X 0.44	15.4

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		4 bed	35	X 0.73	25.55	
		5+ bed	14	X 1.11	15.54	
		Flats, Maisonettes, etc.				
		2 bed	14	X 0.04	0.56	
		3+ bed	14	X 0.3	4.2	
		Total number of units	140	Total Child Yield	65	
Cost & funding source	Indicative developer contributions using Planning Obligations SPD methodology including commuted sum for 10 year period: <ul style="list-style-type: none"> • Foxhill: c.£250,000 • Ensleigh: c.£125,000 • Warminster Road: c.£50,000 					

Infrastructure Matrix
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SPORT & RECREATION																													
Policy Context	<ul style="list-style-type: none"> • B&NES Local Plan Policy IMP.& SR.3 • B&NES Planning Obligations SPD • Draft Core Strategy Policy CP13 • National Planning Policy Framework • Built Facilities Report (Knight, Kavanagh & Page, 2009) 																												
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The NPPF recognises that opportunities for sport and recreation can make an important contribution to the health and well-being of communities. Planning policies should be based on robust and up-to-date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision. Information gained from the assessments should be used to determine what open space, sports and recreational provision is required. • The Council has had regard to a Built Facilities report by Knight, Kavanagh & Page (2009) which has identified the types of facility where there are existing short falls in provision. • In order for new housing areas to develop into sustainable communities, it is vital that adequate social and community facilities, including sport and recreation, are provided as an integral part of the development and not as an afterthought. Sport England advocates that new developments should contribute to the sporting and recreational needs of the locality made necessary by their development. 																												
Proposed provision / capital requirements on site & Options considered)	<ul style="list-style-type: none"> • All new residential developments place additional burdens on sport and recreation facilities and therefore contributions will be sought towards their provision and maintenance. • Facilities can be provided on or off site. <p>Indicative Sport facilities Planning Obligations Assessment (using SPD methodology):</p> <p>Foxhill</p> <table border="1"> <thead> <tr> <th>Size of development (No. of dwellings)</th> <th colspan="3"></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> <td colspan="3"></td> <td>700</td> </tr> <tr> <td>No. of people generated by development - based on 2.3 people per dwelling</td> <td colspan="3"></td> <td>1610</td> </tr> <tr> <th>Type of facility</th> <th>Swimming pool</th> <th>Synthetic Turf Pitch</th> <th>Changing Accommodation</th> <th>Total</th> </tr> <tr> <td>Quantitative standard (m² per 1,000) - from Built Facilities Strategy</td> <td>40.14</td> <td>526.58</td> <td>74.05</td> <td>640.77</td> </tr> </tbody> </table>				Size of development (No. of dwellings)									700	No. of people generated by development - based on 2.3 people per dwelling				1610	Type of facility	Swimming pool	Synthetic Turf Pitch	Changing Accommodation	Total	Quantitative standard (m ² per 1,000) - from Built Facilities Strategy	40.14	526.58	74.05	640.77
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Infrastructure Matrix
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		Space requirement generated by development (m ²)	64.6254	847.7938	119.2205	1031.64	
		Capital cost per m ² of provision – using Sport England Facility costs Q2 2011	£11,795	£112	£2,500	£14,407	
		Capital costs of space requirement	£762,257	£94,625	£298,051	£1,154,933	
		Maintenance costs of provision per m ²	£8.77	£8.77	£8.77	£26.31	
		Maintenance costs (per annum) of space requirement	£567	£7,435	£1,046	£9,047	
		Total contribution (based on one year's maintenance)	£762,823	£102,060	£299,097	£1,163,980	
		Ensleigh					
		Size of development (No. of dwellings)		350			
		No. of people generated by development - based on 2.3 people per dwelling		805			
		Type of facility	Swimming pool	Synthetic Turf Pitch	Changing Accommodation	Total	
		Quantitative standard (m ² per 1,000) – from Built Facilities Strategy	40.14	526.58	74.05	640.77	
		Space requirement generated by development (m ²)	32.3127	423.8969	59.61025	515.82	
Capital cost per m ² of provision – using Sport England Facility costs Q2 2011	£11,795	£112	£2,500	£14,407			
Capital costs of space requirement	£381,128	£47,476	£149,026	£577,630			
Maintenance costs of provision per m ²	£8.77	£8.77	£8.77	£26.31			
Maintenance costs (per annum) of space requirement	£283	£3,718	£523	£4,524			
Total contribution (based on one year's maintenance)	£381,412	£51,194	£149,548	£582,154			
Warminster Road							

Infrastructure Matrix
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	Size of development (No. of dwellings)		140		
	No. of people generated by development - based on 2.3 people per dwelling		322		
	Type of facility	Swimming pool	Synthetic Turf Pitch	Changing Accommodation	Total
	Quantitative standard (m ² per 1,000) - from Built Facilities Strategy	40.14	526.58	74.05	640.77
	Space requirement generated by development (m ²)	12.92508	169.55876	23.8441	206.33
	Capital cost per m ² of provision - using Sport England Facility costs Q2 2011	£11,795	£112	£2,500	£14,407
	Capital costs of space requirement	£152,451	£18,991	£59,610	£231,052
	Maintenance costs of provision per m ²	£8.77	£8.77	£8.77	£26.31
	Maintenance costs (per annum) of space requirement	£113	£1,487	£209	£1,809
	Total contribution (based on one year's maintenance)	£152,565	£20,478	£59,819	£232,862
Cost & funding source	Developer contributions.				

Infrastructure Matrix
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LIFE-LONG LEARNING	
Policy Context	<ul style="list-style-type: none"> • B&NES Local Plan Policy IMP.1 & CF.3 • B&NES Planning Obligations SPD • Draft Core Strategy Policy CP13
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The Planning Obligations SPD states that new housing carries a minimum standard cost of £90 per person for a contribution towards libraries. The tariff applies to all new housing sites from one new unit upwards. • This is made up as follows: a minimum standard of 30sqm of new library space per 1,000 population; and a construction and initial equipment cost of £2,987 per sqm. • This gives a cost of $(30 \times £2,987) = £89,610$ per 1,000 people, or £89.61 per person (rounded to £90).
Proposed provision / capital requirements on site & Options considered)	<p>Foxhill</p> <ul style="list-style-type: none"> • 1610 people (at 2.3 people per dwelling) x £90 = £144,900 <p>Ensleigh</p> <ul style="list-style-type: none"> • 805 people (at 2.3 people per dwelling) x £90 = £72,450 <p>Warminster Road</p> <ul style="list-style-type: none"> • 322 people (at 2.3 people per dwelling) x £90 = £28,980
Cost & funding source	Developer contributions

Infrastructure Matrix
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TRANSPORT – Highways	
Policy Context	<ul style="list-style-type: none"> • B&NES Planning Obligations SPD • Joint Local Transport Plan • B&NES Local Plan policies IMP.1 & T.24 • Draft Core Strategy Policy CP13
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The Council will seek planning contributions to any improvements to the transport system necessary due to any impact created by the proposed developments. <p>Foxhill</p> <ul style="list-style-type: none"> • Foxhill MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Foxhill MOD site • The Foxhill MOD site is bounded to its south by the A3062 Bradford Road and to its west by the minor road Fox Hill. The former is the main east-west route through the Combe Down area of Bath and is heavily trafficked. The current site has a direct access to Bradford Road opposite the Forester public house; and a secondary access onto Fox Hill. • Traffic generation work undertaken indicates that re-development of the Foxhill MOD site for either residential only or residential led mixed use development can be expected to increase the level of access traffic; especially as the current MOD usage has been run-down over a period of time. This will increase pressure on Hawthorn Grove unless associated highway improvements are put in place to provide enhanced access capacity to Bradford Road. <p>Ensleigh</p> <ul style="list-style-type: none"> • Ensleigh MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Ensleigh MOD site • The Ensleigh MOD site is bounded by Lansdown Road on its western side. This forms a key arterial route into the city from the north to the east-west A420 route, and indirectly from/to the A46 and M4 Junction 18 via Freezing Hill Lane. The Lansdown Park and Ride site serving the north side of the city is located just some 500m north of the site on Lansdown Road. • There are no present weekday peak hour congestion problems in the vicinity of the site although vehicles turning right from Lansdown Road into Granville Road to access the main MOD site entrance can create localised impedance to northbound straight-ahead traffic in the morning peak hour. • South of the site inbound queuing on Lansdown Road occurs at the junction with Richmond Road in the morning peak period, whilst some congestion can also be created by parents dropping off children outside Kingswood School during this period. North of the site the critical location of note is the Lansdown Road/Weston Lane junction.

**Infrastructure Matrix
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	<p>In the morning peak hour drivers turning right from Weston Lane can experience difficulty in finding suitable 'gaps' in traffic on Lansdown Road. Queuing associated with this right turn movement can then block vehicles making the left turn.</p> <p>Warminster Road</p> <ul style="list-style-type: none"> • Warminster Road MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Warminster Road MOD site • The Warminster Road MOD site is bounded by the A36 Warminster Road along the whole of its southern boundary. Just west of the site this key road divides to form two routes around Sydney Gardens at the traffic signal controlled Beckford Road/Sydney Road junction. Beckford Road provides the extension of the designated A36 route around the gardens into Sydney Place. • There are no regular operational problems caused by a shortfall in capacity at junctions in the vicinity of the site. However, queuing problems do occur in the northbound direction on Bathwick Street in the weekend evening peak period and at other times due to over-capacity conditions at the A4 Cleveland Place junction. • Traffic generation work undertaken indicates that re-development of the Warminster Road site for residential use will not significantly change the overall level of two-way traffic when compared with current usage which would be removed when the MOD use ceases. However, traffic movement patterns in the weekday peak periods will be different.
<p>Proposed provision / capital requirements on site & Options considered)</p>	<p>Foxhill</p> <ul style="list-style-type: none"> • The number of dwellings planned for will require at least two permanent points of vehicular access. It is envisaged these would be as follows: a primary access achieved via a new mini-roundabout junction with the A3062 Bradford Road; where the existing MOD access is now; and a secondary vehicular access point onto Fox Hill. • The connecting road between these access points should be aligned such that no part of the site is more than a 6 minute walk from this loop. • Improvements to the A3062 Bradford Road/Fox Hill Road junction will be required. A mini-roundabout is preferred which would act as an additional speed reducing feature on this road. It is accepted, however, that the space available to accommodate a mini-roundabout meeting current standards is restricted, and the layout complicated by Cleevedale Road. As such, alternative junction treatments may need to be examined in the Transport Assessment. • The North Road/Ralph Allen Drive junction will also require upgrading from its current major-minor to improve capacity. • Additional traffic calming measures on Bradford Road/North Road between Fox Hill and Ralph Allen Drive will be required as off-site works to both encourage lower speeds and, critically, ease pedestrian crossing movements.

**Infrastructure Matrix
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	<ul style="list-style-type: none"> • Any wider highways improvements as identified in the transport assessment accompanying a planning application <p>Ensleigh</p> <ul style="list-style-type: none"> • For housing development in excess of 300 dwellings two points of permanent vehicle access would be required as follows: a primary access achieved via a new roundabout junction with Lansdown Road, most likely located where the existing secondary access to the MOD site is now; and a secondary access onto Granville Road. • Appropriate treatment of the Lansdown Road/Granville Road junction will need to be considered in the off-site highway works. This will depend on the anticipated phasing of development within the site and; more specifically, when the principal access onto Lansdown Road is provided. • Improvements to Lansdown Road/Richmond Road/St Stephens Road junction • Any wider highways improvements as identified in the transport assessment accompanying a planning application <p>Warminster Road</p> <ul style="list-style-type: none"> • For this level of development a single permanent point of vehicular access is considered adequate. The residential road design guidance currently adopted by Council allows up to 300 dwellings for cul-de-sac layouts. However, to avoid problems created by a temporary total blockage of this single access the layout must incorporate a secondary point of access for emergency purposes. • The access arrangements considered necessary are as follows: a primary access achieved via a new roundabout junction with the A36 Warminster Road sited just east of the existing exit from the MOD site; which will ensure that the required sight stopping distance (SSD) to the give-way lines on the two A36 approaches can be achieved; and a secondary emergency vehicular access onto Warminster Road. It is envisaged that this could be provided where the existing entrance to the site is now. • The internal arrangement of roads should ensure that vehicles within the site can access both the main access and the secondary emergency linkage should circumstances dictate. • A need for additional highway works to other junctions in the vicinity of the site is not envisaged; particularly as the net increase in traffic resulting from the closure of the MOD site and subsequent residential re-development is expected to be marginal. • Notwithstanding the above, the operation of these two junctions should be considered in any Transport Assessment prepared to support a planning application for re-development of the site. • The Highways Agency wish to work with developer of this site so that any impact on the A36 Trunk Road can be fully considered and addressed at an early stage.
Cost & funding source	<ul style="list-style-type: none"> • The developer will be expected to provide a contribution in instances where the threshold for transport contributions is triggered as outlined in the Planning Obligations SPD. The Council will expect this matter to be dealt

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with in the developer's Transport Assessment.

TRANSPORT – Public Transport	
Policy Context	<ul style="list-style-type: none"> • B&NES Planning Obligations SPD • Joint Local Transport Plan • B&NES Local Plan policies IMP.1 & T.24 • Draft Core Strategy Policy CP13
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The Council will seek planning contributions to any improvements to the transport system necessary due to any impact created by the proposed developments. <p>Foxhill</p> <ul style="list-style-type: none"> • Foxhill MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Foxhill MOD site • Service 13 would benefit from any works to improve side road capacity onto Bradford Road. • Service 1 routes via Ralph Allen Drive into the City Centre and terminates by the existing MOD entrance/exit onto Bradford Road. There is an existing turning facility at this point to allow outbound services to 'U' turn, set-down and pick-up passengers before returning to the City Centre. Not all of this turning loop is within highway limits, so any sale of the site and potential need of this land for highway access improvements would necessitate a replacement 'terminus' facility. • Bus services 20A and 20C operate along Bradford Road to the south of the MOD site. These services provide additional links to the University, Odd Down (Sainsbury's supermarket), Oldfield Park and the Royal United Hospital (RUH). <p>Ensleigh</p> <ul style="list-style-type: none"> • Ensleigh MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Ensleigh MOD site • The present site is served by Service 2; which terminates at an existing bus turnaround area in Granville Road opposite the main entrance. • First Group are the primary Bus operator and have expressed a concern with the Ensleigh Site, specifically what happens in the period between the MoD moving out and new development taking place. <p>Warminster Road</p> <ul style="list-style-type: none"> • Warminster Road MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements

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	<p>considered necessary to bring forward the Warminster Road MOD site</p> <ul style="list-style-type: none"> • The site is served by a number of bus services operating along the A36 Warminster Road, with an existing bus stop in each direction located just east of the junction with Minster Way. These comprise local Service 4 to Bathampton and the longer distance Wiltshire Council supported Services 264/265 to Warminster via Bradford-on-Avon. • The commercial viability of bus services operating past this site along Warminster Road is not likely to be affected by the change of use.
<p>Proposed provision / capital requirements on site & Options considered)</p>	<p>Foxhill</p> <ul style="list-style-type: none"> • Changes to the routing of Service 13 would best achieve effective bus penetration into the existing MOD site; with this Service using the proposed loop road linking the primary and secondary vehicular access points. It is suggested that the revised Service 13 routing is arranged so that buses access Bradford Road via the new mini-roundabout junction serving the site; as opposed to via Fox Hill. • The alignment of the main loop road and pedestrian linkages within the site will need to ensure that the walk time to the nearest stop does not exceed a 6 minute threshold. Bus stops along this loop road would need to be spaced at c.400m intervals and provided with raised kerbs, suitable bus waiting shelters and Real Time Information (RTI) displays (or funding provision allowed for) and an electrical supply. These stops will need to be Bath Transport Package specifications to comply with the standard that will be adopted with bus passenger infrastructure improvements elsewhere in the City. • Extending the existing Service 13 route will result in increased operating costs; therefore financial support would be sought from the developer for a five year period to ensure that an adequate service is in place as and when the initial phase of housing is first occupied. • A contribution towards interim support for Service 1 would be sought from the developer for a fixed period to maintain its provision until such time as the new housing is substantially complete. There would otherwise be a risk of the service being withdrawn by the bus operator if the loss of the MOD patronage were to make it commercially unviable; albeit temporarily. • Services 20A and 20C are presently underpinned by additional funding secured from Sainsbury's under a Section 106 agreement that provides three new vehicles for the life of the 8 year contract. Notwithstanding the funding from Sainsbury's this additional service element has a cost to the Council of circa £60,000 per annum at 2011/12 prices. The Council would thus seek to secure additional Section 106 contributions from the potential Foxhill developer in order to extend the life of this additional service element, potentially for a further three years. <p>Ensleigh</p> <ul style="list-style-type: none"> • The aim should be to extend the service route of Service 2 into the site to achieve better public transport access. As such, a loop road or turnaround facility will need to be accommodated in the internal layout.

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	<ul style="list-style-type: none"> • Bus stops should be provided at approximately 400m intervals along this loop. • All bus stops will require raised kerbs, bus shelters and Real Time Information (RTI) displays (including power supplies); and in addition bus stop 'Clearway' markings will be needed at all stops to prevent obstruction by on-street parking. • Service 2 does not provide an evening service after 6:45pm; and is currently supported by the Council in respect of services provided on Sundays and Bank Holidays. With a new residential source of demand at Enleigh following re-development it is considered that a more extensive evening service should be available via Service 2, As such the Council would seek a contribution towards providing this service enhancement for a period of 5 years. <p>Warminster Road</p> <ul style="list-style-type: none"> • There is no expectation that buses would need to turn into and out of the site. • Services 264/265 operate Wiltshire's TRAPEZE RTI system, so a contribution would be sought with a view to further equipping these services with VIX equipment so that the stop displays outside the site provide predictions for these services as well as Service 4.
Cost & funding source	<ul style="list-style-type: none"> • The developer will be expected to provide a contribution in instances where the threshold for transport contributions is triggered as outlined in the Planning Obligations SPD. The Council will expect this matter to be dealt with in the developer's Transport Assessment.

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TRANSPORT – Pedestrian & Cycle Facilities	
Policy Context	<ul style="list-style-type: none"> • B&NES Planning Obligations SPD • Joint Local Transport Plan • B&NES Local Plan policies IMP.1 & T.24 • Draft Core Strategy Policy CP13
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The Council will seek planning contributions to any improvements to the transport system necessary due to any impact created by the proposed developments. <p>Foxhill</p> <ul style="list-style-type: none"> • Foxhill MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Foxhill MOD site • Due to the volume/speed of traffic; and the relative absence of facilities to assist crossing movements, Bradford Road is a severance barrier to pedestrians. As such, crossing delays even in the inter-peak period can be significant. Re-development of the site will increase the volume of traffic using Bradford Road, notably in the peak periods. New residential development is also likely to increase the number of pedestrians seeking to cross Bradford Road, both to the bus stops on the south side of the road and local shops in Combe Road. <p>Ensleigh</p> <ul style="list-style-type: none"> • Ensleigh MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Ensleigh MOD site • There are no existing safety issues with walking and cycling in the vicinity of the site other than an identified desire to assist pedestrians crossing Lansdown Road. • A study is currently being conducted by the Council to establish desire lines for pedestrian crossings on Lansdown Road; the outcome of this will identify the locations where such facilities are needed. <p>Warminster Road</p> <ul style="list-style-type: none"> • Warminster Road MoD Site Transport Improvements (Halcrow, March 2012) sets out the transport improvements considered necessary to bring forward the Warminster Road MOD site • There are no safety issues with walking and cycling in the vicinity of the site other than an identified need to assist pedestrians crossing the A36 where the footpath link at the western end of St Christopher’s Close joins this road. • A key aspiration is a cycle/pedestrian link through the site providing a direct connection to the National Cycle Route along the Kennet and Avon Canal towpath.

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<p>Proposed provision / capital requirements on site & Options considered)</p>	<p>Foxhill The following linkages and additional improvements to walking and cycling facilities in the vicinity of the Foxhill site are deemed necessary to encourage these modes of travel at the outset:</p> <ul style="list-style-type: none"> • Signing/lighting improvements to the existing linkage between Fox Hill and Perrymead to the north of the site. The current use of this linkage as a through traffic route by vehicles is prevented by bollards installed just north of the driveway access to The Old Coach House; this would remain so. • Pedestrian footpath connections to Popes Walk on the eastern boundary of the site. It is suggested that a connection is made in the south-east corner where a gated access is now; and in the north east corner close to the short footpath linkage from Popes Walk into Priory Close. Improvements to the short un-metalled section of Popes Walk to the north of the site should be examined to improve the current unmade surface. • Improvements to allow shared pedestrian/cyclist use on the section of Popes Walk between the south-east corner of the site and the North Road/Ralph Allen Drive junction should be investigated. • The Council are promoting a cycle linkage between North Road and Claverton Down Road through Rainbow Wood to improve access between Combe Down and Bath University. A contribution to the funding of this link would be sought to promote sustainable travel from the site. <p>Ensleigh</p> <ul style="list-style-type: none"> • Following the on-going study into the main pedestrian desire lines for crossing Lansdown Road the Council will be in a more informed position to identify where assisted crossing provision is needed. However, re-development of the site with 400 dwellings would result in a net increase in traffic using the length of Lansdown Road between Granville Road and Richmond Road in the two peak hours. This will increase the present difficulties experienced by pedestrians in crossing this length of Lansdown Road at these times. The Council would therefore seek a contribution to pedestrian and cyclist improvements currently being investigated along the section of Lansdown Road between Granville Road and Richmond Road. • With regard to cyclist facilities it is envisaged that any improvements would take the form of on-carriageway mandatory or advisory cycle lane provision where sufficient width exists and a meaningful length of provision can be achieved. <p>Warminster Road</p> <ul style="list-style-type: none"> • The creation of a new pedestrian/cyclist link through the site linking the A36 with the National Cycle Route along the Avon and Kennet Canal towpath. A new bridge would be needed over the canal with access to/from the towpath suitable for cyclists and the disabled. As such the structure may need to span the towpath as well and utilise a ramped access to it. It should be noted that land on the north side of the canal needed for the
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	<p>construction of this bridge is in the control of the British Waterways Board (BWB); so early discussion with this body will be needed to determine the best means of securing this link.</p> <ul style="list-style-type: none"> • Improvements to the existing footpath along the eastern perimeter of the site linking the A36 with an existing footbridge over the canal. A linkage with the pedestrian footway/footpath network within the proposed site would need to be provided so rerouting this path to a new alignment along this eastern edge may be desirable and allow a higher standard of improvement to be achieved. • A pedestrian access/link on the western boundary to the site to the adjacent primary school in Darlington Road. This would be best achieved by using the existing path linking to the eastern end of Darlington Road. However the Council's adopted highway records show that the section between The Cottage and the MOD site boundary is not adopted highway. As such, the potential developer would need to liaise with the owner of this land to ascertain whether a right-of-way for pedestrians and cyclists can be maintained. • Installation of new pedestrian refuge islands on the A36 Warminster Road where the footpath links from Minster Way and St Christopher's Close join this road.
Cost & funding source	<ul style="list-style-type: none"> • The developer will be expected to provide a contribution in instances where the threshold for transport contributions is triggered as outlined in the Planning Obligations SPD. The Council will expect this matter to be dealt with in the developer's Transport Assessment.

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FLOOD MITIGATION	
Policy Context	<ul style="list-style-type: none"> • B&NES Local Plan Policy IMP.1 • Draft Core Strategy Policy CP5 & CP13 • B&NES SFRA Level 1 • B&NES Flood Risk Management Strategy
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • The Draft Core Strategy states that all development will be expected to incorporate sustainable drainage systems to reduce surface water run-off and minimise its contribution to flood risk elsewhere. <p>Foxhill</p> <ul style="list-style-type: none"> • This site was specifically appraised within the B&36ESS FRA Level 1 document. • This area is not at risk from fluvial flooding from local watercourses. • The area is not within Flood Zones 2 or 3. • There is a potential risk of both Surface and Ground water flooding
Proposed provision / capital requirements on site & Options considered)	<p>Foxhill</p> <ul style="list-style-type: none"> • A Flood Risk Assessment is required as the site is over 1HA in Flood Zone 1. • Sustainable urban drainage is required to mitigate runoff into catchment. <p>Ensleigh</p> <ul style="list-style-type: none"> • A Flood Risk Assessment is required as the site is over 1HA in Flood Zone 1. • Sustainable urban drainage is required to mitigate runoff into catchment. <p>Warminster Road</p> <ul style="list-style-type: none"> • A Flood Risk Assessment is required as the site is over 1HA in Flood Zone 1. • Sustainable urban drainage is required to mitigate runoff into catchment.
Cost & funding source	<ul style="list-style-type: none"> • Site specific Flood Risk Assessments • Developer contributions and/or conditions

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UTILITIES	
Policy Context	<ul style="list-style-type: none"> • Draft Core Strategy Policy CP13 • B&NES Local Plan Policy IMP.1
Basis of need & availability of evidence for the service	<ul style="list-style-type: none"> • Provision of electricity, gas, water supply, sewerage and telecommunications are essential for modern day living and working and to secure a high quality of life. • Consultation with Utilities providers has identified indicative infrastructure requirements.
Proposed provision / capital requirements on site & Options considered)	<p><u>Foxhill</u></p> <p><u>Foul drainage</u> - site to be served by separate systems of on site drainage provided by the developer. Engineering appraisal will determine the nature and scope of any improvements required downstream to mitigate against the increased risk in sewer flooding caused by additional flows. Developer to contribute to the cost of appraisal and any resultant capacity improvements.</p> <p><u>Surface water drainage</u> - no current record of how the site disposes of surface water. Use of SUDs should be investigated. There are public water sewers in the vicinity of the site. There should be no increase in flow rate to these surface water sewers over any current flow rate permitted.</p> <p><u>Water supply</u> - Network modelling will need to be undertaken to determine whether network reinforcement is required. Developer to contribute to cost of reinforcement.</p> <p><u>National Grid</u> - No comments</p> <p><u>Power Distribution Network</u> - Site has high voltage connection to the Western Power Distribution (WPD) network and is signed up for a considerable amount of import capacity. Ability to supply the proposed load would depend on the heating arrangements and whether the development will be heated by electric or gas appliances. If heated by gas then WPD are reasonably confident that the existing infrastructure would be able to support the development without excessive reinforcement or alteration. WPD cannot commit to any arrangements until provided with detailed load estimates, site plans, etc.</p> <p><u>Gas network</u> - Only the Medium Pressure (MP) connection point is able to support the load. This means laying a significant length of MP main to the site before reducing it down to Low Pressure (LP). LP connection points are</p>

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available closer to the site but reinforcement would be required to support the load.

Ensleigh

Foul drainage - site to be served by separate systems of on site drainage provided by the developer. Engineering appraisal will determine the nature and scope of any improvements required downstream to mitigate against the increased risk in sewer flooding caused by additional flows. Developer to contribute to the cost of the appraisal and any resultant capacity improvements.

Surface water drainage - no current record of how the site disposes of surface water. Use of SUDs should be investigated. There is a 300mm diameter public surface water sewer in Granville Road. There should be no increase in flow rate to this surface water sewer over any current flow rate permitted.

Water supply - there are issues with water pressure in the vicinity of the site. Network modelling will need to be undertaken to determine the nature of off site reinforcement to ensure adequate pressure is available for the development without adversely affecting existing customers. Developer to contribute to cost of reinforcement.

National Grid – No comments

Power Distribution Network - Site has high voltage connection to the Western Power Distribution (WPD) network and is signed up for a considerable amount of import capacity. Ability to supply the proposed load would depend on the heating arrangements and whether the development will be heated by electric or gas appliances. If heated by gas then WPD are reasonably confident that the existing infrastructure would be able to support the development without excessive reinforcement or alteration. WPD cannot commit to any arrangements until provided with detailed load estimates, site plans, etc.

Gas network - Reinforcement of low pressure gas network is required.

Warminster Road

Foul drainage - site to be served by separate systems of on site drainage provided by the developer. Site is currently served locally by a 100mm diameter public foul sewer which will not have the capacity for 140 dwellings so requires upsizing. Engineering appraisal will determine the nature and scope of any improvements required downstream to

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	<p>mitigate against the increase risk in sewer flooding caused by additional flows. Developer to contribute to the cost of appraisal and any resultant capacity improvements.</p> <p><u>Surface water drainage</u> - no current record of how the site disposes of surface water. Upon redevelopment assumption that developer will utilise SUDs arrangements and possible discharge to the canal with approval from the LPA and British Waterways.</p> <p><u>Water supply</u> - site currently served from the water main to east and pumps via a MoD private booster station to a private water tower within site. Network modelling will need to be undertaken to determine whether network reinforcement is required. Developer to contribute to cost of reinforcement.</p> <p><u>National Grid</u> - No comments</p> <p><u>Power Distribution Network</u> - Site has high voltage connection to the Western Power Distribution (WPD) network and is signed up for a considerable amount of import capacity. Ability to supply the proposed load would depend on the heating arrangements and whether the development will be heated by electric or gas appliances. If heated by gas then WPD are reasonably confident that the existing infrastructure would be able to support the development without excessive reinforcement or alteration. WPD cannot commit to any arrangements until provided with detailed load estimates, site plans, etc.</p> <p><u>Gas network</u> - Reinforcement of low pressure gas network required although connecting to the medium pressure network is also possible.</p>
Agency responsible	<p>Developed in consultation with:</p> <ul style="list-style-type: none"> • National Grid • Wales & West Utilities • Wessex Water • Western Power Distribution
Cost & funding source	<p>All utilities costs should be paid for through the normal development process.</p>