

**Appendix 1 - Surrey Road Housing Development:
Income and Expenditure**

	General Fund
<i>Homes</i>	8
<i>Prudential Borrowing Period</i>	50
	PRS
	£000s
Scheme Costs	
Works budget cost	2,630
Build and oncost contingency	131
Fees & Other Costs	328
Interest (during Build Phase)	85
Land Acquisition costs	0
Total Scheme Cost	3,174
Scheme Funding	0
Homes England Grant - TBC Affordable Housing Grant	0
Homes England Grant - Accelerated Construction	0
Affordable Housing s106 Contributions	0
Sales - Open Market Sales	0
Housing Revenue Account	0
- Capital Funding - 1 for 1 Right to Buy Receipts	0
- S106 Contributions	0
Local Authority Funding	0
	0
Prudential Borrowing - additional borrowing	3,174
Total Scheme Funding	3,174
Net Cost	0

Appendix 2 - 8xPRS Surrey Road Housing Development: Financial Appraisal Long-term Cash flow

Long-Term Cashflow		Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gross Residential Rent	2%	(165,726)	(169,041)	(172,421)	(175,870)	(179,387)	(182,975)	(186,634)	(190,367)	(194,174)	(198,058)	(202,019)	(206,059)	(210,181)	(214,384)	(218,672)	(223,045)	(227,506)	(232,056)	(236,698)	(241,431)	
Voids	8% of Gross residential rent	13,258	13,523	13,794	14,070	14,351	14,638	14,931	15,229	15,534	15,845	16,162	16,485	16,814	17,151	17,494	17,844	18,201	18,565	18,936	19,315	
Gross Rent after allowance for Voids		(152,468)	(155,517)	(158,628)	(161,800)	(165,036)	(168,337)	(171,704)	(175,138)	(178,640)	(182,213)	(185,858)	(189,575)	(193,366)	(197,234)	(201,178)	(205,202)	(209,306)	(213,492)	(217,762)	(222,117)	
RSL Management	2.0% CPI	3,816	3,892	3,970	4,050	4,131	4,213	4,297	4,383	4,471	4,560	4,652	4,745	4,840	4,936	5,035	5,136	5,239	5,343	5,450	5,559	
Maintenance	2.0% CPI	6,264	6,389	6,517	6,647	6,780	6,916	7,054	7,195	7,339	7,486	7,636	7,788	7,944	8,103	8,265	8,431	8,599	8,771	8,947	9,125	
Major Repairs	2.0% CPI	0	0	0	0	0	0	0	0	0	22,193	22,637	23,090	23,551	24,022	24,503	24,993	25,493	26,003	26,523	27,053	
Annual operational spend		10,080	10,282	10,487	10,697	10,911	11,129	11,352	11,579	11,810	34,240	34,924	35,623	36,335	37,062	37,803	38,559	39,330	40,117	40,919	41,738	
Net income before debt repayment		(142,388)	(145,236)	(148,140)	(151,103)	(154,125)	(157,208)	(160,352)	(163,559)	(166,830)	(147,974)	(150,933)	(153,952)	(157,031)	(160,172)	(163,375)	(166,642)	(169,975)	(173,375)	(176,842)	(180,379)	
Repayment of Borrowing (interest)		134,132	133,319	132,471	131,586	130,663	129,700	128,695	127,647	126,554	125,414	124,224	122,983	121,689	120,338	118,929	117,459	115,926	114,326	112,658	110,917	
Repayment of Borrowing (principal)		18,820	19,633	20,481	21,366	22,289	23,252	24,257	25,305	26,398	27,538	28,728	29,969	31,263	32,614	34,023	35,493	37,026	38,626	40,294	42,035	
Cash outflow / (inflow)		10,564	7,716	4,812	1,849	(1,173)	(4,256)	(7,400)	(10,607)	(13,878)	4,978	2,019	(1,000)	(4,079)	(7,220)	(10,423)	(13,690)	(17,023)	(20,423)	(23,890)	(27,427)	
Cumulative cash outflow / (inflow)		10,564	18,280	23,092	24,941	23,768	19,512	12,112	1,505	(12,373)	(7,395)	(5,376)	(6,376)	(10,455)	(17,675)	(28,098)	(41,788)	(58,811)	(79,234)	(103,124)	(130,552)	

Appendix 2 - 8xPRS Surrey Road Housing Development: Financial Appraisal Long-term Cash flow

Long-Term Cashflow	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Gross Residential Rent	(246,260)	(251,185)	(256,209)	(261,333)	(266,560)	(271,891)	(277,329)	(282,875)	(288,533)	(294,304)	(300,190)	(306,194)	(312,317)	(318,564)	(324,935)	(331,434)	(338,062)	(344,824)	(351,720)	(358,754)	(365,930)	(373,248)
Voids	19,701	20,095	20,497	20,907	21,325	21,751	22,186	22,630	23,083	23,544	24,015	24,495	24,985	25,485	25,995	26,515	27,045	27,586	28,138	28,700	29,274	29,860
Gross Rent after allowance for Voids	(226,559)	(231,090)	(235,712)	(240,427)	(245,235)	(250,140)	(255,143)	(260,245)	(265,450)	(270,759)	(276,175)	(281,698)	(287,332)	(293,079)	(298,940)	(304,919)	(311,017)	(317,238)	(323,582)	(330,054)	(336,655)	(343,388)
RSL Management	5,670	5,784	5,899	6,017	6,138	6,261	6,386	6,513	6,644	6,777	6,912	7,050	7,191	7,335	7,482	7,632	7,784	7,940	8,099	8,261	8,426	8,594
Maintenance	9,308	9,494	9,684	9,878	10,075	10,277	10,482	10,692	10,906	11,124	11,346	11,573	11,805	12,041	12,282	12,527	12,778	13,033	13,294	13,560	13,831	14,108
Major Repairs	27,594	28,146	28,709	29,283	29,869	30,466	31,076	31,697	32,331	32,978	33,637	34,310	34,996	35,696	36,410	37,138	37,881	38,639	39,411	40,200	41,004	41,824
Annual operational spend	42,573	43,424	44,292	45,178	46,082	47,004	47,944	48,902	49,881	50,878	51,896	52,934	53,992	55,072	56,174	57,297	58,443	59,612	60,804	62,020	63,261	64,526
Net income before debt repayment	(183,987)	(187,666)	(191,420)	(195,248)	(199,153)	(203,136)	(207,199)	(211,343)	(215,570)	(219,881)	(224,279)	(228,764)	(233,340)	(238,006)	(242,767)	(247,622)	(252,574)	(257,626)	(262,778)	(268,034)	(273,395)	(278,863)
Repayment of Borrowing (interest)	109,101	107,207	105,231	103,169	101,018	98,775	96,434	93,993	91,446	88,789	86,017	83,125	80,109	76,962	73,679	70,255	66,682	62,955	59,067	55,012	50,780	46,367
Repayment of Borrowing (principal)	43,851	45,745	47,721	49,783	51,934	54,177	56,518	58,959	61,506	64,163	66,935	69,827	72,843	75,990	79,273	82,697	86,270	89,997	93,885	97,940	102,172	106,585
Cash outflow / (inflow)	(31,035)	(34,714)	(38,468)	(42,296)	(46,201)	(50,184)	(54,247)	(58,391)	(62,618)	(66,929)	(71,327)	(75,812)	(80,388)	(85,054)	(89,815)	(94,670)	(99,622)	(104,674)	(109,826)	(115,082)	(120,443)	(125,911)
Cumulative cash outflow / (inflow)	(161,586)	(196,301)	(234,769)	(277,065)	(323,266)	(373,450)	(427,697)	(486,088)	(548,706)	(615,635)	(686,962)	(762,774)	(843,162)	(928,217)	(1,018,031)	(1,112,701)	(1,212,324)	(1,316,997)	(1,426,824)	(1,541,906)	(1,662,348)	(1,788,259)

Appendix 2 - 8xPRS Surrey Road Housing Development: Financial Appraisal Long-term Cash flow

Long-Term Cashflow	43	44	45	46	47	48	49	50	Total
Gross Residential Rent	(380,713)	(388,327)	(396,094)	(404,016)	(412,096)	(420,338)	(428,745)	(437,320)	
Voids	30,457	31,066	31,688	32,321	32,968	33,627	34,300	34,986	
Gross Rent after allowance for Voids	(350,256)	(357,261)	(364,406)	(371,695)	(379,128)	(386,711)	(394,445)	(402,334)	(12,895,645)
RSL Management	8,766	8,942	9,120	9,303	9,489	9,679	9,872	10,070	
Maintenance	14,390	14,678	14,971	15,271	15,576	15,888	16,205	16,530	
Major Repairs	42,660	43,513	44,384	45,271	46,177	47,100	48,042	49,003	
Annual operational spend	65,816	67,133	68,475	69,845	71,242	72,667	74,120	75,602	2,242,065
Net income before debt repayment	(284,440)	(290,129)	(295,931)	(301,850)	(307,887)	(314,045)	(320,325)	(326,732)	
Repayment of Borrowing (interest)	41,762	36,959	31,948	26,720	21,267	15,578	9,644	3,453	4,473,134
Repayment of Borrowing (principal)	111,190	115,993	121,004	126,232	131,685	137,374	143,308	149,499	3,174,466
Cash outflow / (inflow)	(131,468)	(137,177)	(142,979)	(148,898)	(154,935)	(161,093)	(167,373)	(173,780)	(3,005,981)
Cumulative cash outflow / (inflow)	(1,919,747)	(2,056,923)	(2,199,902)	(2,348,800)	(2,503,735)	(2,664,828)	(2,832,201)	(3,005,981)	

Appendix 3 - Surrey Road Housing Development Scheme

Accommodation Schedule			
Number of units	Unit size m2	Unit type	Tenure
4	113	3b5p	Private Rented Sector
4	100	3b5p	Private Rented Sector
8			

Rent Levels This scheme will be charged at Market Rent level:

3-bed house £379.25 to £402.76pw LHA level for info
£1650pcm to £1750pcm £218.63pw

Open market sales values

3 bed	100m2	£450k	End terrace or semi detached
3 bed	113m2	£450k	End terrace or semi detached
3 bed	100m2	£425k	Mid terrace
3 bed	100m2	£475k	Detached

Service Charges

Nil as included in rent

Build costs

£3,087 m2

Additional costs

£122 per sqm equating to £104k in total to include £34k for PV roof panels, £50,000 for Front retaining wall, and £20,000 for the removal of Japanese

Contingency

5% additional build contingency (£131.5k)

Void and bad debts

8%

Management

£477 unit/pa Based on historic variable costs per unit for PRS units only.

Maintenance

£783 unit/pa Based on historic variable costs per unit for PRS units only.

Major Repairs

0.8% of build cost deferred to Yr10 As agreed with Principal Surveying Manager for PRS units only.

Loan interest rate %

4.32% Short term; 4.32% Long term (PWLb prevailing rate at 1/2/2023)

Loan term and type

50 year annuity

On costs/Fees element

Amount

Acoustic Engineer	£	1,170
Arbo report	£	1,600
Architects fee (up to planning)	£	10,725
Asbestos, needles, clear	£	-
Bat survey	£	3,984
Carbon reduction statement	£	1,595
CIL and Heathland mitigation	£	76,720
Carpets	£	7,200
Daylighting assessment	£	-
Demolition inc notices	£	-
Design review panel, pre-app, Consultation	£	-
Development Team	£	40,000
Drainage design	£	3,030
Ecological survey and BMP	£	1,400
Elec Disconnection	£	-
Employers Agent fee	£	9,600
Gas disconnection	£	-
Ground investigation	£	9,360
Heritage consultant	£	-
Highways consultant	£	-
Homeless Payments & disturbance	£	-
Landscape consultant	£	-
Legal sales fee	£	36,000
M+E Engineer	£	-
Marketing	£	54,000
Principle Designer	£	2,450
Planning application fee	£	3,696
PV assessment	£	795
Site fencing	£	3,997
Structural Engineer and Drainage	£	-
Security	£	-
Section 106	£	50,000
Topographical	£	-
Tree protection and plan	£	-
Utilities and sustainability assessment	£	-
Valuation	£	1,250
Westworks fee	£	-
White Goods	£	9,600
Water disconnection		

Total £ **328,172**

Note: On costs/fees are split by number of units to each financial appraisal

Equality Impact Assessment: Report and EIA Action Plan

Purpose

Policy/Service under development/review:	Development of the site at Surrey Road, Bournemouth, BH2 6AZ.
Service Lead and Service Unit:	Nigel Ingram, Head of Housing Delivery; Housing Delivery Team.
People involved in EIA process:	Jonathan Thornton, Housing Development Manager. Peter Friend, Project Manager. Claire Lynch, Housing Development Officer.
Date EIA conversation started:	25/06/2021, and updated 08/02/2022

Background

To provide additional sustainable housing in the BCP area. The project includes the development of 8 residential units for the private rented sector (PRS). The completed project will provide much needed additional family housing within the BCP conurbation.

There is need for additional homes across all tenures, with the demand for family housing being particularly high.

This site previously comprised of a number of residential villa's that were demolished for the development of the Wessex Way in the 1960's/70's. This is a piece of land that was essentially left over, which is green space – it contains trees and vegetation. Part of the site forms part of the retaining structure to support the Wessex Way. The site is in poor condition and is not maintained by the Council due to this cost. It is considered that this site represents an opportunity to create new high-quality purpose-built residential dwellings.

The benefits of the proposal include:

- Providing at least 8 new residential town houses. These dwellings will be provided within the PRS sector.
- These homes will help towards imminent new Local Plan housing targets and will also contribute significantly to unmet housing need.
- The new homes provided will be designed and built to a better standard than currently.
- All homes will be built to the highest sustainability standards delivered through the excellent fabric first and airtightness approach (designed in this case to accommodate the principles of Passivhaus). All homes will be constructed to Building Control Approved Document Part M category1 (Access to and use of buildings- also to be referred to in future reports as the bronze standard.). This means that the new dwellings designed will meet wheelchair accessible standards.
- Benefiting families which may live in unsuitable or under/ over occupied housing.
- Increasing job opportunities within the construction sector during the construction phase.
- Generating a long-term surplus to the Housing Revenue Account.

The project will benefit families who may live in unsuitable or over occupied housing.

The units, type and mix will be informed from the adopted and emerging Local Plans, the Strategic Housing Market Assessment (SHMA) and the housing register statistics. The final tenure mix will be developed after consideration of numerous factors including the need for the scheme to be financially viable and a providing a positive return, housing demands, site specifics and the need to ensure a sustainable community. The Council's Neighbourhood Management team and the Housing Options and Partnerships team will be closely involved in the development of this scheme to help ensure that it adequately meets housing needs and is designed in such a way to be sustainable and to enable good quality housing management. The completed housing dwellings will be let and managed on the same basis as our existing housing stock. All the EIA's and other policies which apply to our existing stock to apply to these new units.

The Housing Delivery Team will engage with the Housing Portfolio Holder on the strategic approach to new council owned housing. As part of this engagement process, the team will also speak with the Ward Councillors and Portfolio Holder and relevant Council staff. Local residents will be consulted by letter prior to the planning application and also will have the opportunity during the planning process to comment.

The team will engage BCP's Communication Team to widely publicize this scheme via social mediate such as LinkedIn, BCP's own website, the Bournemouth Daily Echo and other media platforms, as appropriate. Comments about the proposals will be accepted by the Housing Delivery Team throughout the duration of the project. Where relevant, advice or other information will be provided to interested parties.

Findings

How does your decision affect those of:

- **Different Ages:** Properties will be available for all eligible applicants. No issues regarding this characteristic have been identified but this factor will be considered along with any service user identified needs.
- **Disability:** Properties will be constructed to Building Control Approved Document Part M category1 (Access to and use of buildings- also to be referred to in future reports as the bronze standard.). This means that the new dwellings designed will meet wheelchair accessible standards.
- **Sex/ Gender Reassignment/ Pregnancy and Maternity/ Marriage and Civil/ Race/ Religion or Belief/ Sexual Orientation/ Armed Forces Community and any other factors/ groups:** Properties will be available for all eligible applicants. No issues regarding these characteristics have been identified but this factor will be considered along with any service user identified needs.
- **Human Rights:** Will facilitate Article 11 of the International Covenant on Economic, Social and Cultural Rights – the right of everyone to adequate standard of living for themselves and their family, including adequate food, clothing and housing. No human rights have been identified but these factors will be considered/ monitored along with any service users identified needs.

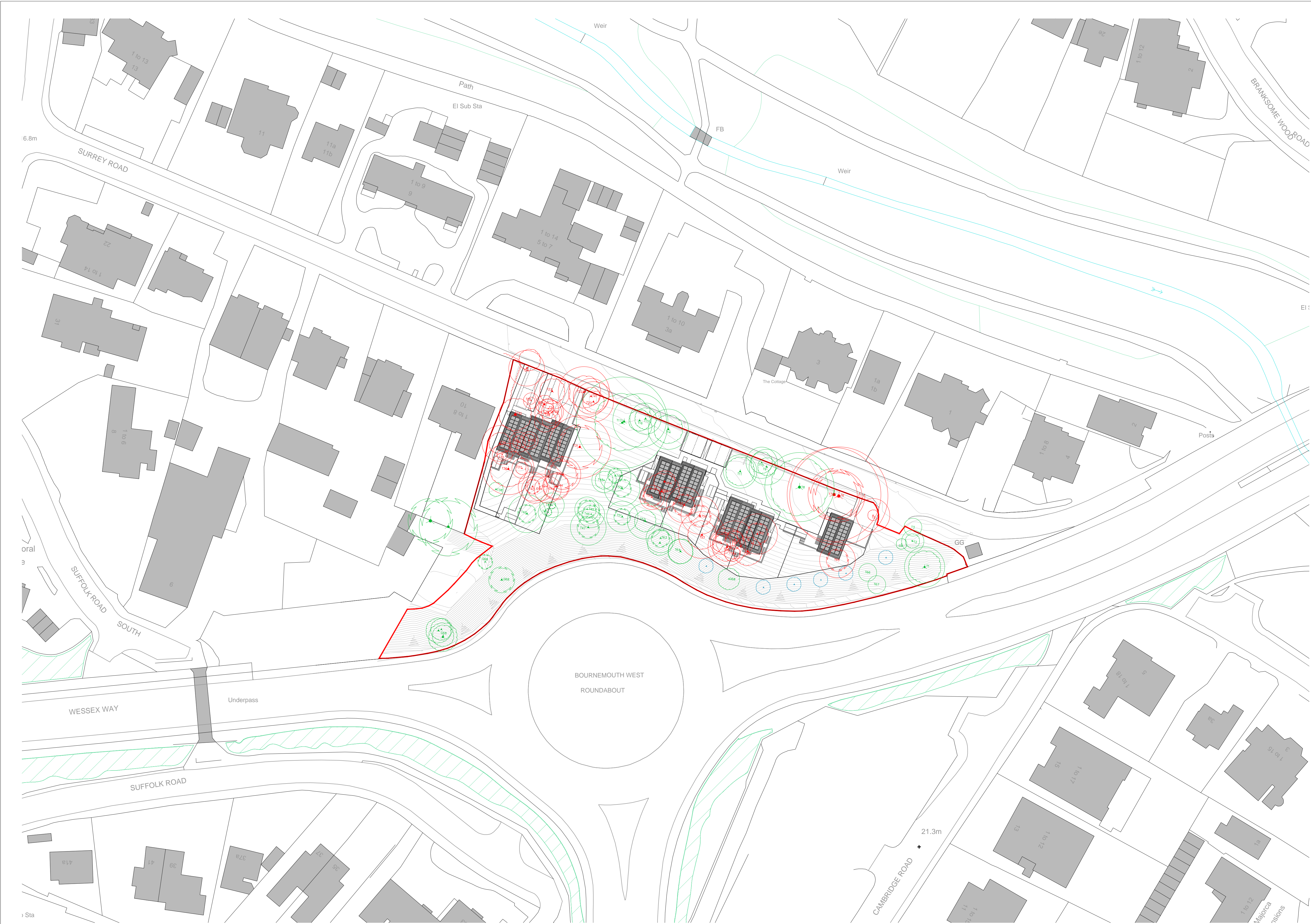
Conclusion

1. This proposal does not introduce new changes to policy or services and the properties will be designed for families.
2. These homes will help towards meeting imminent new Local Plan housing targets and will also contribute significantly to unmet housing need.
3. The new homes provided will be designed and built to a high standard. Please see pt 3 and 4 below.
4. All homes will be built to the highest sustainability standards delivered through the excellent fabric first and airtightness approach (designed in this case to accommodate the principles of Passivhaus).
5. Properties will be constructed to Build Control Approved Document Part M Category 1 (Access to and use of buildings – also to be referred to in future reports as the bronze standard). This means that the new dwellings designed will meet wheelchair accessible standards.
6. Benefiting families which may live in unsuitable or under/ over occupied housing.
7. Increasing job opportunities within the construction sector during the construction phase of the development.
8. Generating a short time and long-term surplus income to the Housing Revenue Account.

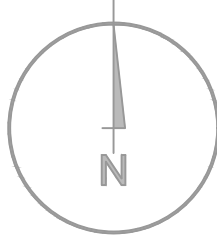
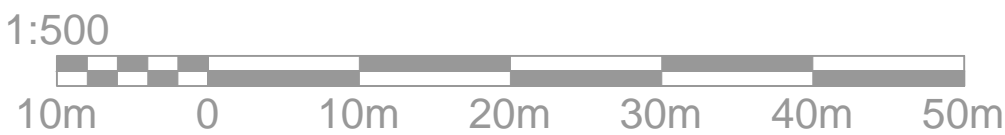
Equality Impact Assessment: Report and EIA Action Plan

Equality Impact Assessment Action Plan

Issue identified	Action required to reduce impact	Timescale	Responsible officer
The properties are designed for families – a mix of 3 and 4 bed houses.	<p>As a consequence of no flats on this site, impact of smaller dwellings sizes can be offset by delivery of flats (smaller dwelling sizes) elsewhere within the BCP area.</p> <p>3 and 4 bed dwellings can be more suitable for those with larger family sizes. However, some families may be currently occupying smaller 1 and 2 bed flats, which could be released for smaller sized households once this development is complete. Subsequent upsizing will free up flats or other smaller sized dwellings.</p> <p>The identification of housing need for specific client groups within the neighbourhood will be monitored as part of the ongoing Housing Strategy process.</p>	Ongoing	Affordable Housing and Resettlement Manager.



proposed block plan [1:500 @ A1]



notes

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figured dimensions are to be used in preference to scaled dimensions.

no deviation from this drawing will be permitted without prior consent of the architect.

all drawings are prepared subject to a full measured and structural survey of the buildings and site.

all structural work is subject to the appointment of a structural engineer to confirm and agree the structural proposals.

os promap licence no. 100020449.

health & safety:
exceptional risks involving specific methods of construction or exceptional maintenance issues can be found within the designers risk assessment.

scale width 50 mm @ a1 - 25 mm @ a3

revision	notes	date	drawn	checked
A	Drawing Updated As Per Comments	10.03.22	JF	HM
B	Boundary Updated PV Panels Added	20.04.22	JF	HM
C	Drawing Updated As Per Comments	30.06.22	JF	HM
D	Amended following client's comments	12.07.22	IR	HM

client

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project	Land At Surrey Road Bournemouth BH4 9HW		
detail	Proposed Block Plan		
drawn	JF	checked	HM
date	Jan 22	status	Planning
a1 scale	1:500	a3 scale	1:1000
			28127- PD109 D



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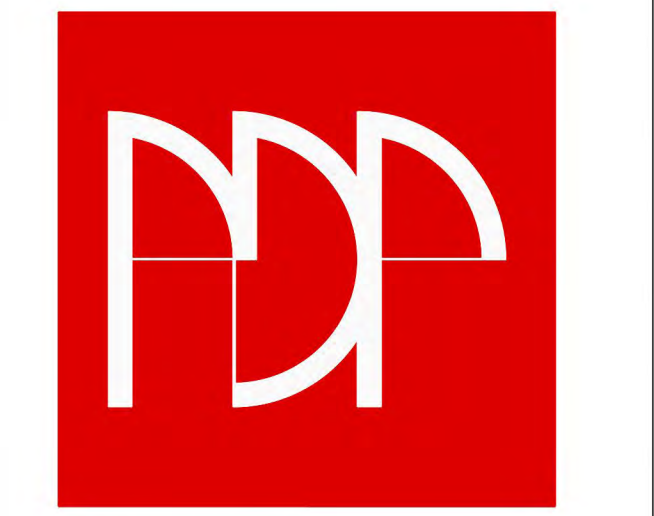
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project	Land At Surrey Road Bournemouth BH4 9HW		
detail	Proposed Site Plan		
drawn	JF	checked	HM
date	Jan 22	status	Planning
a1 scale	1:250	a3 scale	1:500
			28127-PD110
			D



Schedule of Accommodation	
Total Site Area: 5347sqm	
Proposed Plots 1 to 8	
Row of Three	
Plot 1 : 3B 5P	100sqm
Plot 2 : 3B 5P	100sqm
Plot 3 : 3B 5P	100sqm
Semi Detached	
Plot 4 : 3B 5P	113sqm
Plot 5 : 3B 5P	113sqm
Semi Detached	
Plot 6 : 3B 5P	113sqm
Plot 7 : 3B 5P	113sqm
Detached	
Plot 8 : 3B 5P	100sqm
Parking Spaces	12no.

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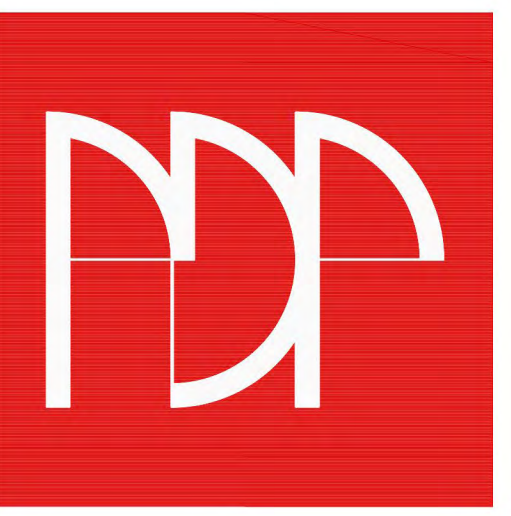
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revision	notes	date	drawn	checked
A	Drawing updated to comments	16.02.22	JF	HM
B	Drawing updated as per comments	10.03.22	JF	HM
C	Boundary Updated As Per Comments	19.04.22	JF	HM
D	Drawing updated as per comments	30.06.22	JF	HM
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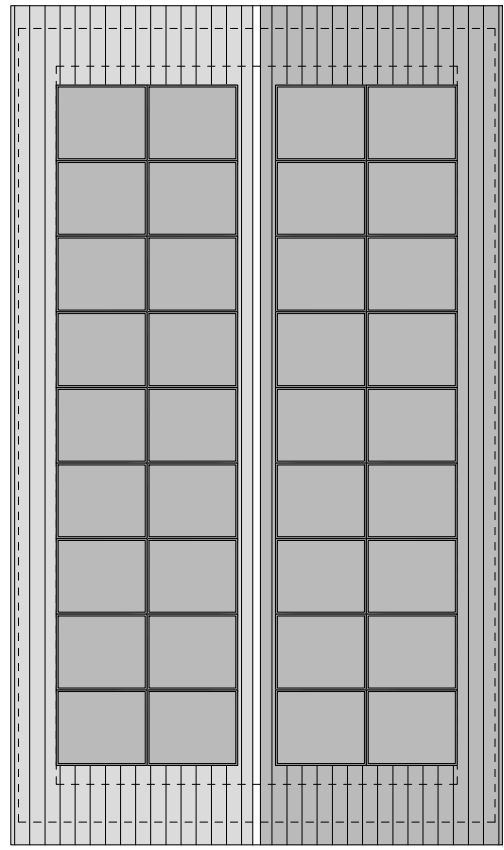
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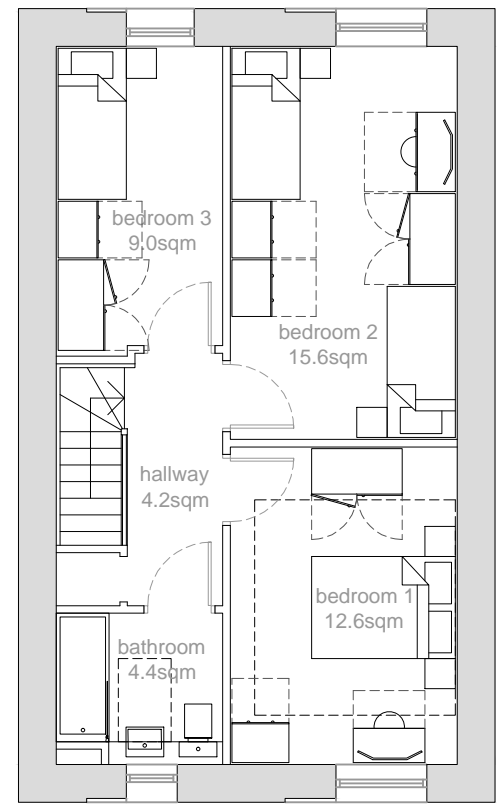
project **Land At Surrey Road
Bournemouth
BH4 9HW**

detail **Proposed Ground Floor Plan**

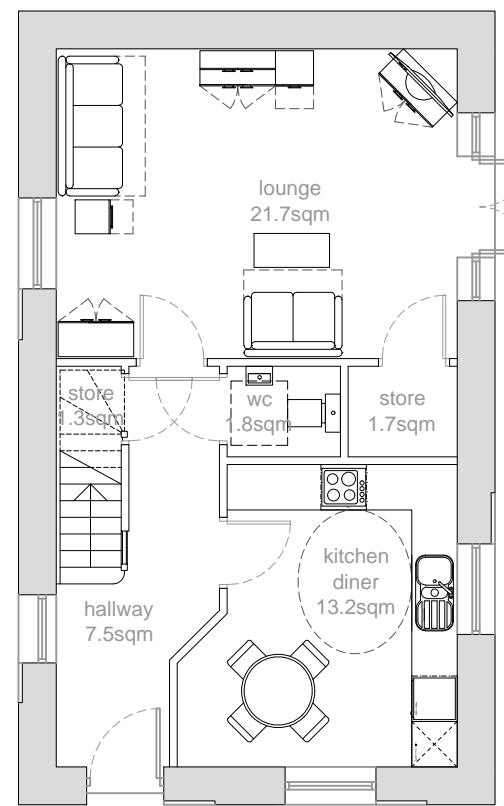
drawn	JF	checked	HM
date	Jan 22	status	Planning
a1 scale	1:200	a3 scale	1:400
		rev	28127-PD111 E



roof level

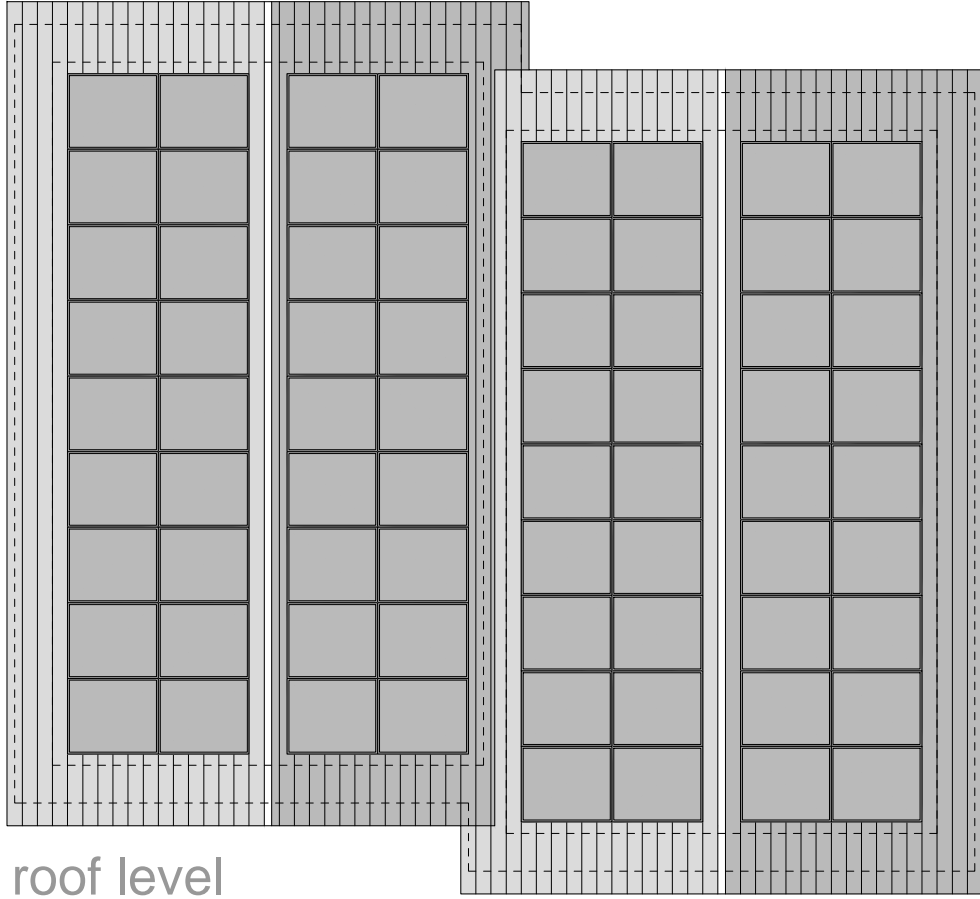


first floor

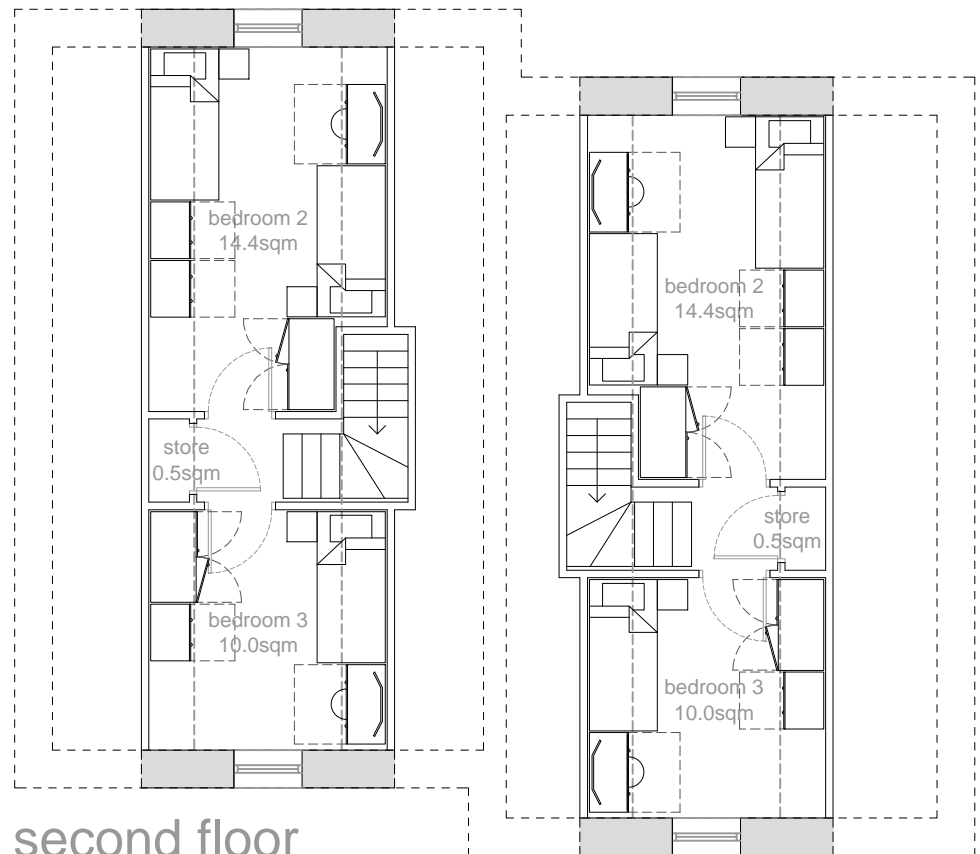


plot 8
ground floor

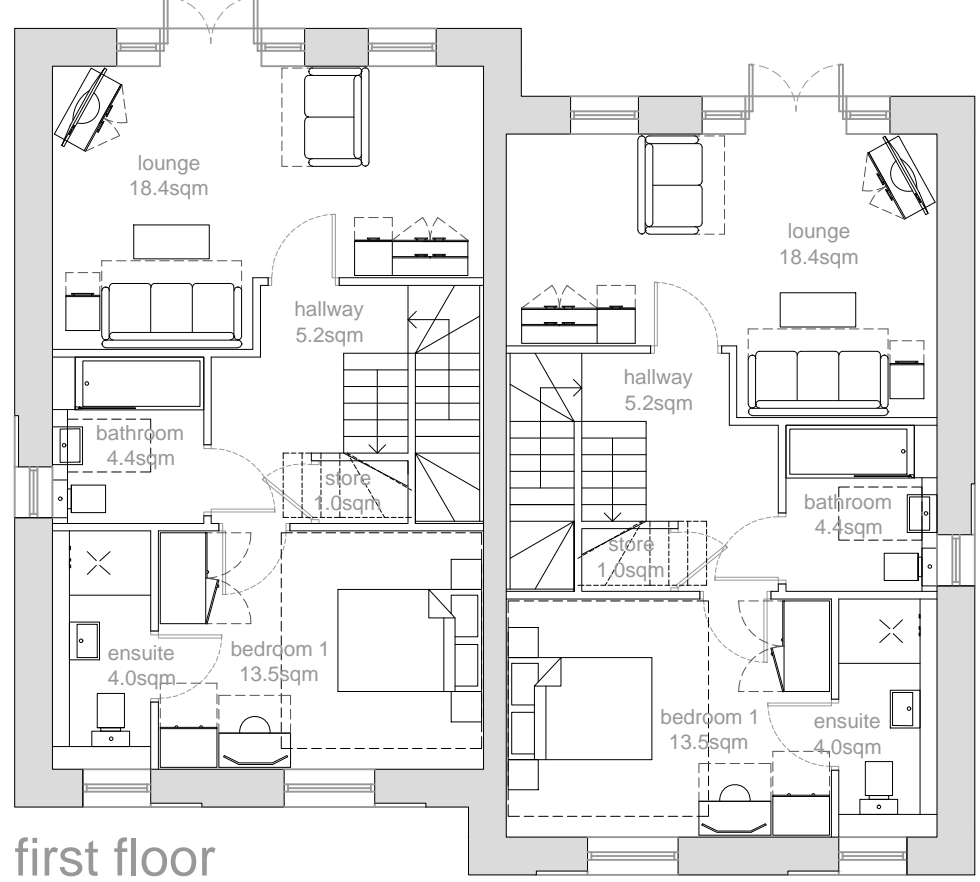
Schedule of Accommodation Plot 8 : 3 Bed 5 Person Total : 100sqm	
Lounge	21.7sqm
Kitchen Diner	13.2sqm
Bedroom One	12.6sqm
Bedroom Two	15.6sqm
Bedroom Three	9.0sqm
Hallway	11.7sqm
Storage	3.5sqm
Bathroom	4.4sqm
WC	1.8sqm
Parking Spaces	2no.



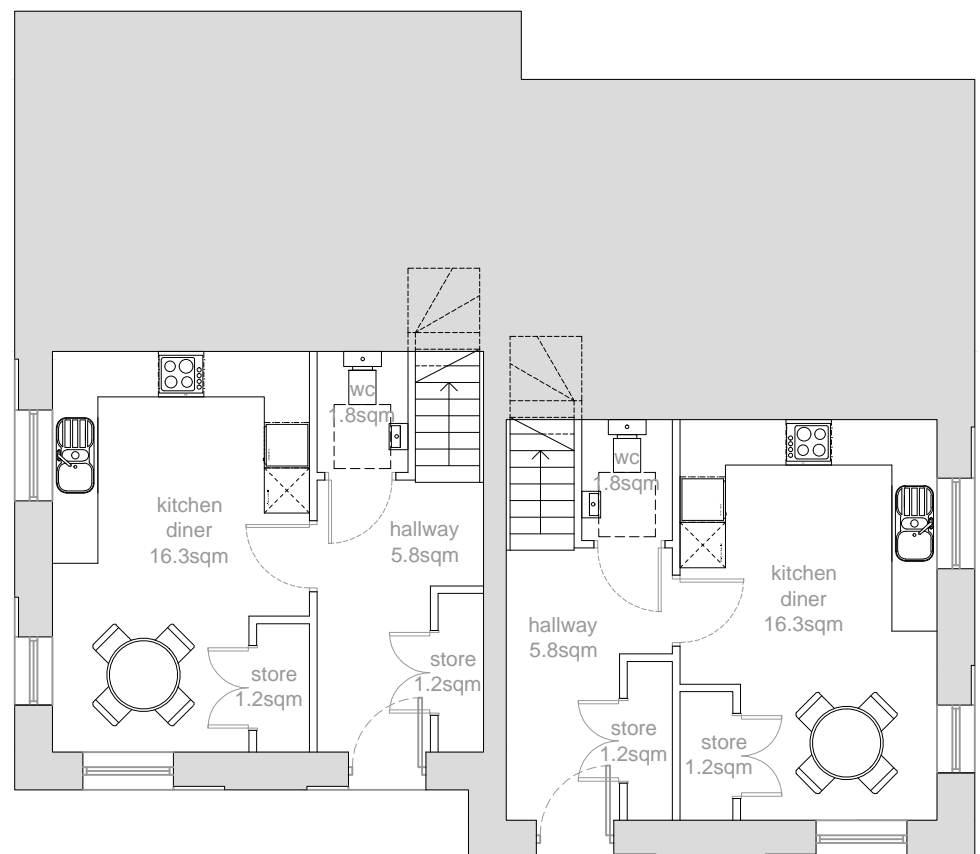
roof level



second floor



first floor



plot 7
ground floor

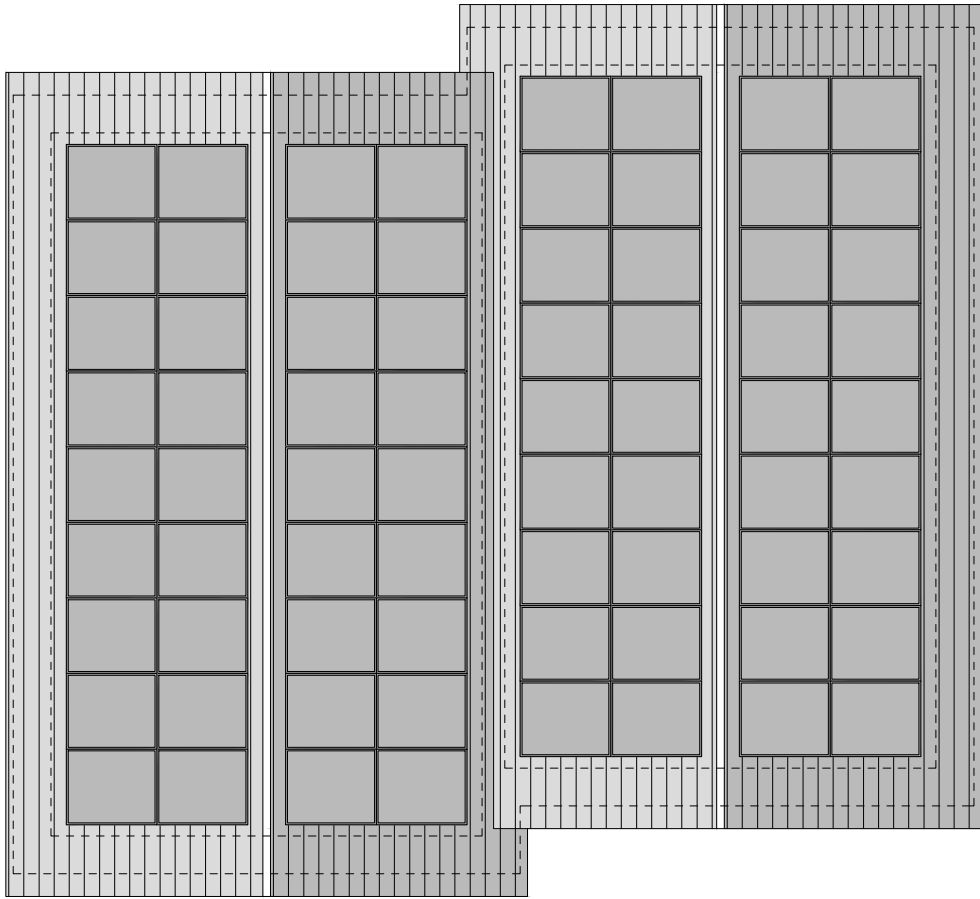
plot 6

Schedule of Accommodation Plot 7 : 3 Bed 5 Person Total : 113sqm	
Lounge	18.4sqm
Kitchen Diner	16.3sqm
Bedroom One	13.5sqm
Bedroom Two	14.4sqm
Bedroom Three	10.0sqm
Hallway	11.0sqm
Storage	3.9sqm
Bathroom	4.4sqm
Ensuite	4.0sqm
WC	1.8sqm
Parking Spaces	1no.

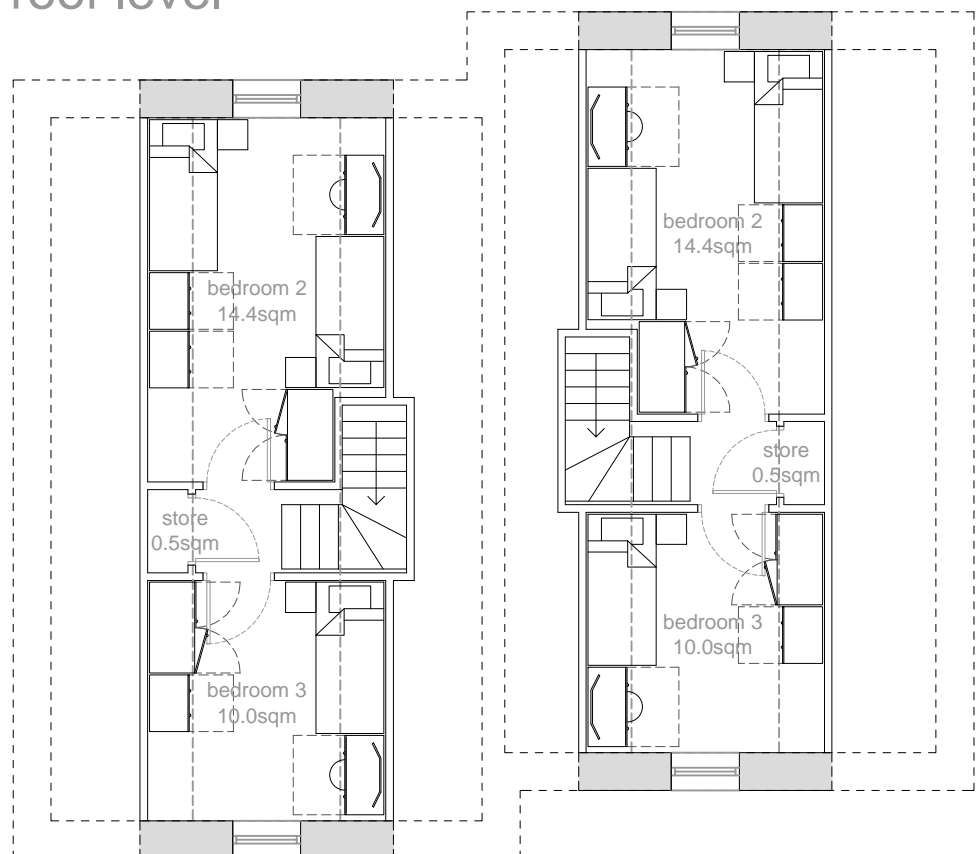
Schedule of Accommodation Plot 6 : 3 Bed 5 Person Total : 113sqm	
Lounge	18.4sqm
Kitchen Diner	16.3sqm
Bedroom One	13.5sqm
Bedroom Two	14.4sqm
Bedroom Three	10.0sqm
Hallway	11.0sqm
Storage	3.9sqm
Bathroom	4.4sqm
Ensuite	4.0sqm
WC	1.8sqm
Parking Spaces	1no.

Schedule of Accommodation Plot 5 : 3 Bed 5 Person Total : 113sqm	
Lounge	18.4sqm
Kitchen Diner	16.3sqm
Bedroom One	13.5sqm
Bedroom Two	14.4sqm
Bedroom Three	10.0sqm
Hallway	11.0sqm
Storage	3.9sqm
Bathroom	4.4sqm
Ensuite	4.0sqm
WC	1.8sqm
Parking Spaces	1no.

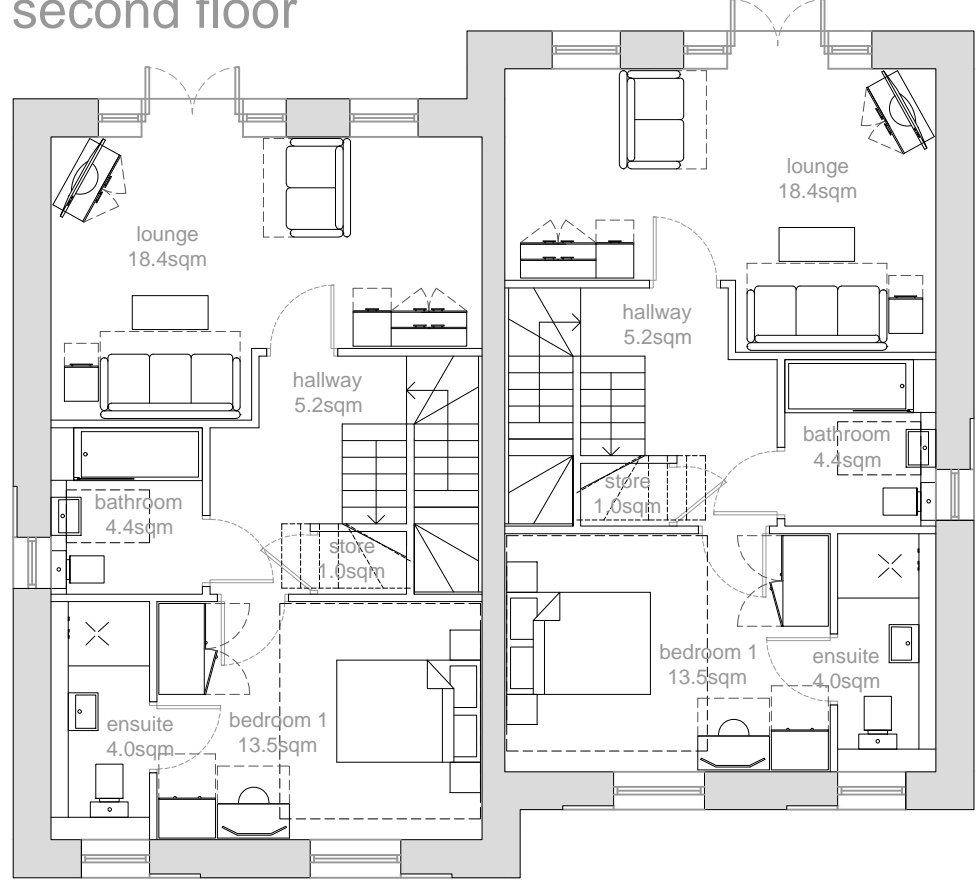
Schedule of Accommodation Plot 4 : 3 Bed 5 Person Total : 113sqm	
Lounge	18.4sqm
Kitchen Diner	16.3sqm
Bedroom One	13.5sqm
Bedroom Two	14.4sqm
Bedroom Three	10.0sqm
Hallway	11.0sqm
Storage	3.9sqm
Bathroom	4.4sqm
Ensuite	4.0sqm
WC	1.8sqm
Parking Spaces	1no.



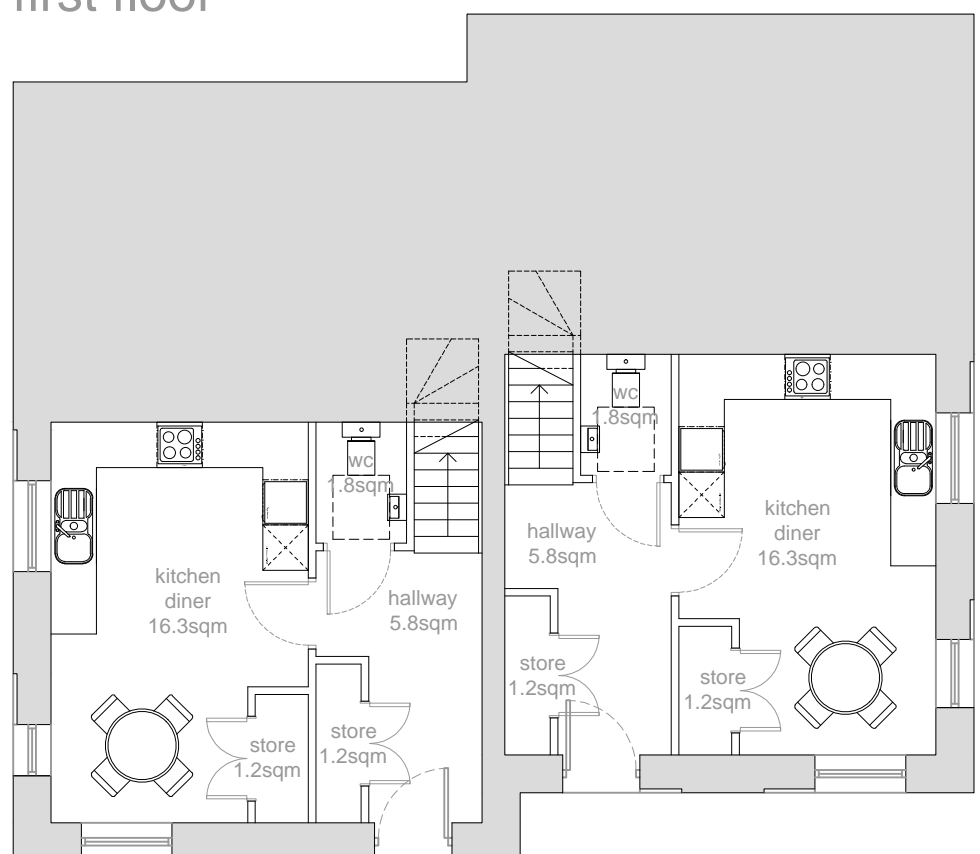
roof level



second floor

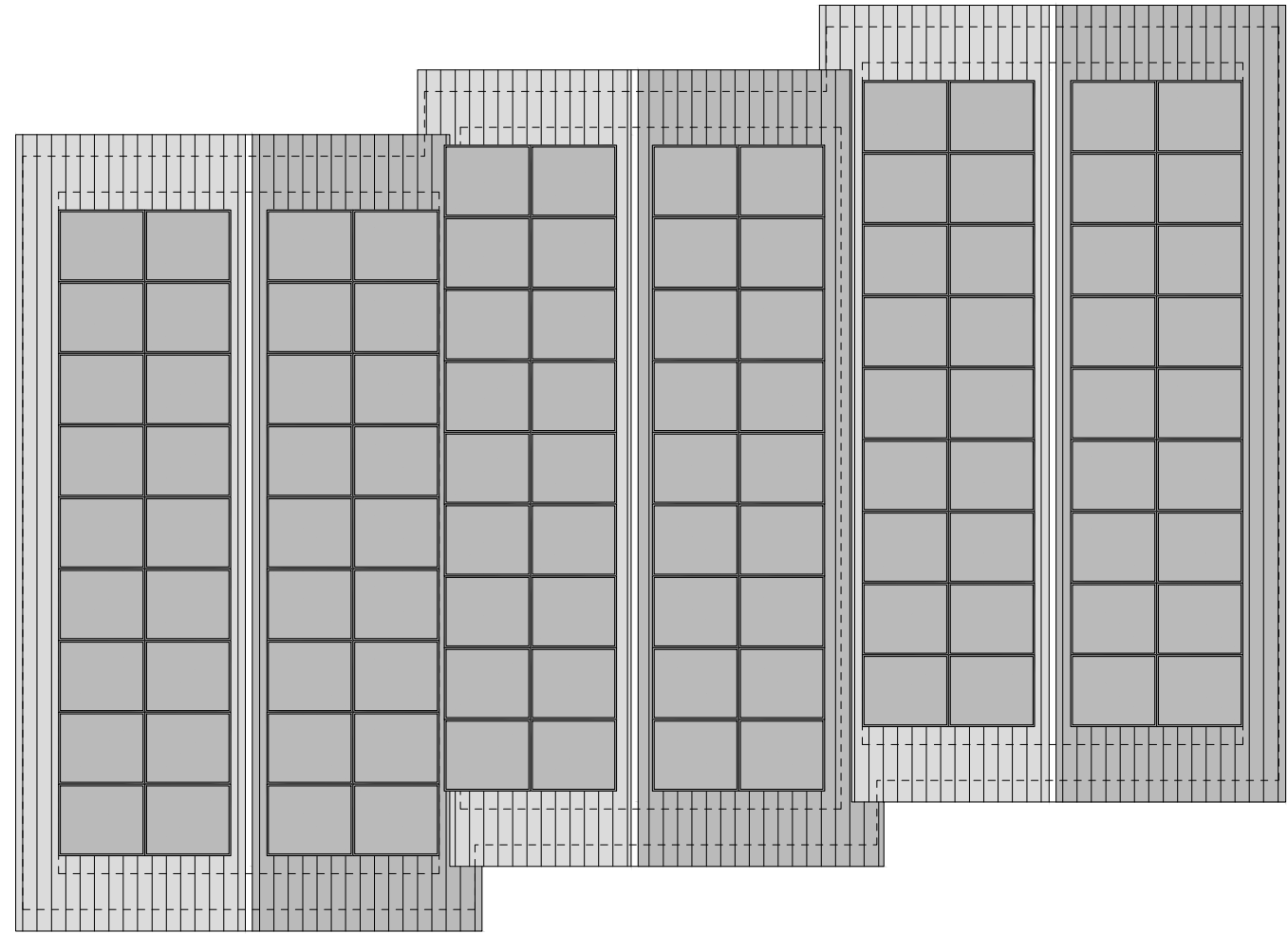


first floor

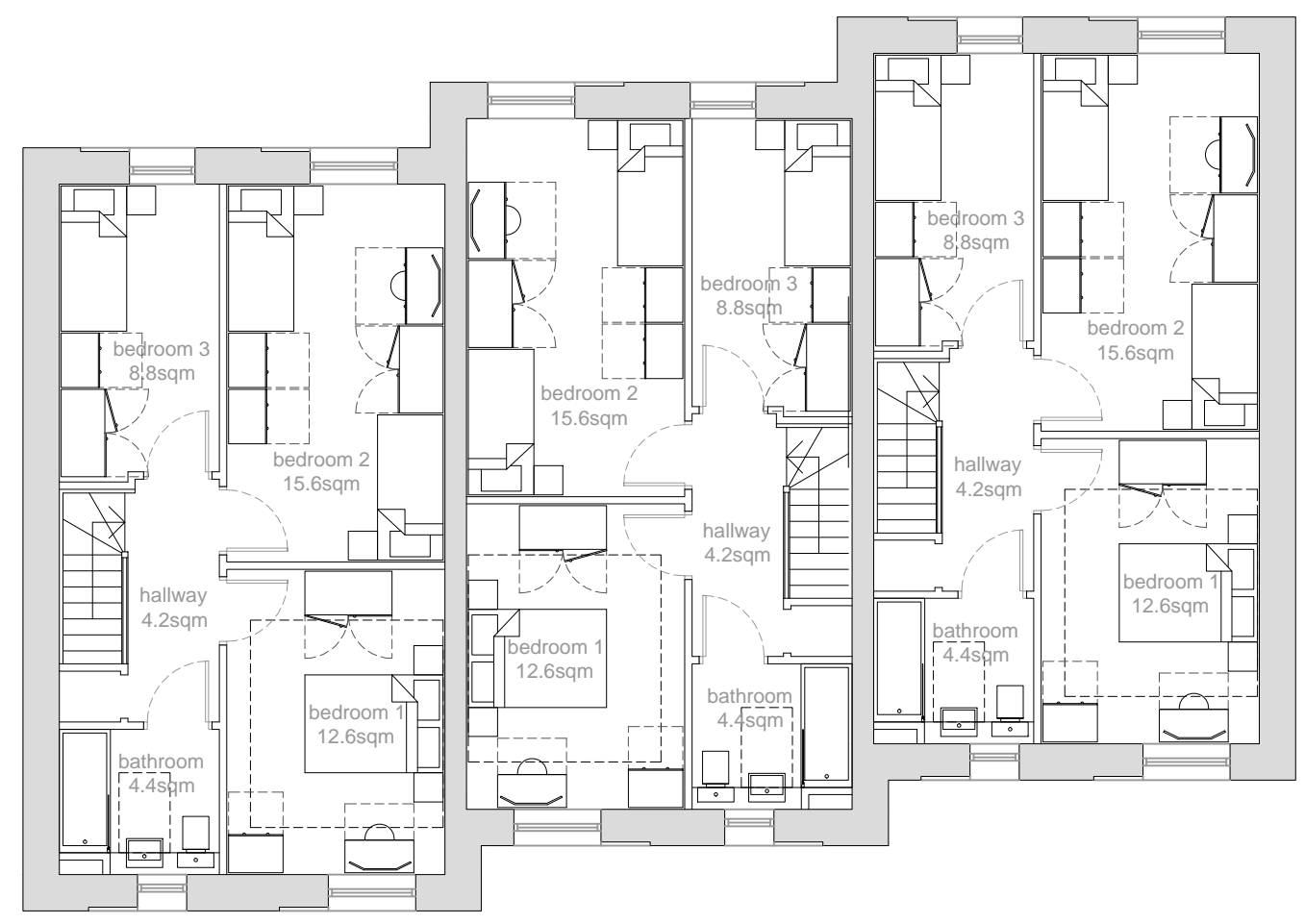


plot 5
ground floor

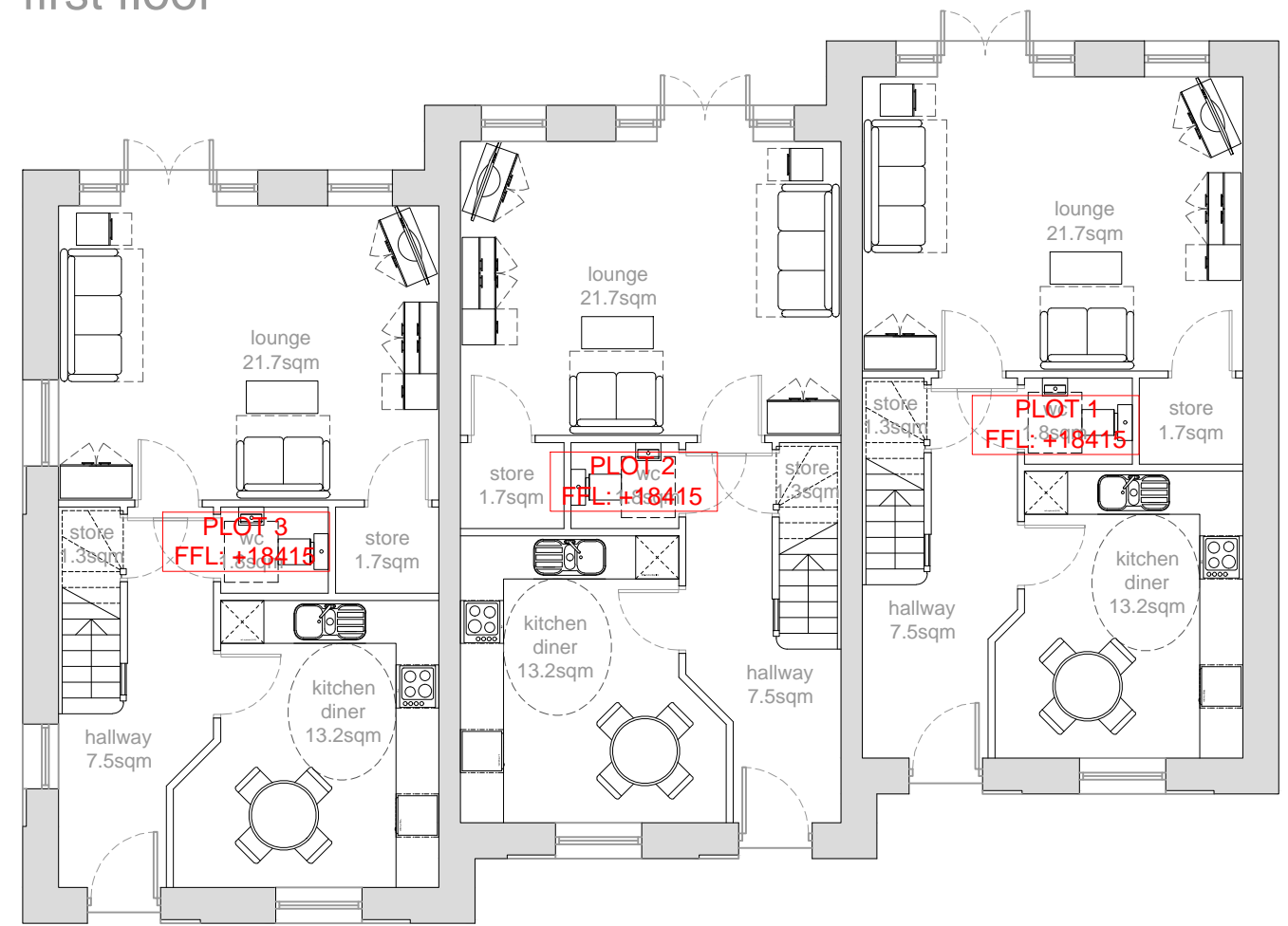
plot 4



roof level



first floor



plot 3
ground floor

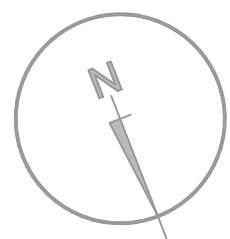
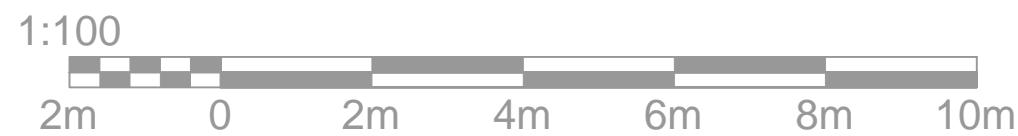
plot 2

plot 1

Schedule of Accommodation Plot 3 : 3 Bed 5 Person Total : 100sqm	
Lounge	21.7sqm
Kitchen Diner	13.2sqm
Bedroom One	12.6sqm
Bedroom Two	15.6sqm
Bedroom Three	9.0sqm
Hallway	11.7sqm
Storage	3.5sqm
Bathroom	4.4sqm
WC	1.8sqm
Parking Spaces	2no.

Schedule of Accommodation Plot 2 : 3 Bed 5 Person Total : 100sqm	
Lounge	21.7sqm
Kitchen Diner	13.2sqm
Bedroom One	12.6sqm
Bedroom Two	15.6sqm
Bedroom Three	9.0sqm
Hallway	11.7sqm
Storage	3.5sqm
Bathroom	4.4sqm
WC	1.8sqm
Parking Spaces	2no.

Schedule of Accommodation Plot 1 : 3 Bed 5 Person Total : 100sqm	
Lounge	21.7sqm
Kitchen Diner	13.2sqm
Bedroom One	12.6sqm
Bedroom Two	15.6sqm
Bedroom Three	9.0sqm
Hallway	11.7sqm
Storage	3.5sqm
Bathroom	4.4sqm
WC	1.8sqm
Parking Spaces	2no.



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os promap licence no. 100020449.

health & safety:
exceptional risks involving specific methods of construction or exceptional maintenance issues can be found within the designers risk assessment.

revision		notes	date	drawn	checked
A		Drawing updated to comments	16.02.22	JF	HM
B		Drawing updated as per comments	10.03.22	JF	HM
C		PV Panels Added	20.04.22	JF	HM
D		Drawing updated as per comments	30.06.22	JF	HM

client	

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project	Land At Surrey Road Bournemouth BH4 9HW		
detail	Proposed Floor Plans		
drawn	JF	checked	HM
date	Jan 22	status	Planning
a1 scale	1:100	a3 scale	1:200
			28127-PD112
			D



plot no. 1 - 8
proposed street scene
1:200 @ A1



plot no.8

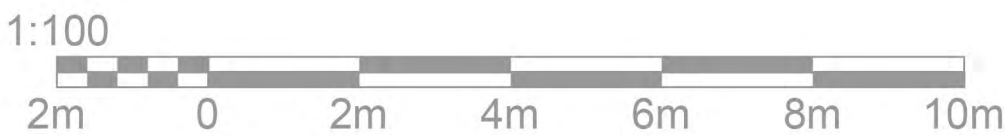
plot no. 6 - 7



plot no. 4 - 5

plot no. 1 - 3

proposed street scene [1:100@ A1]



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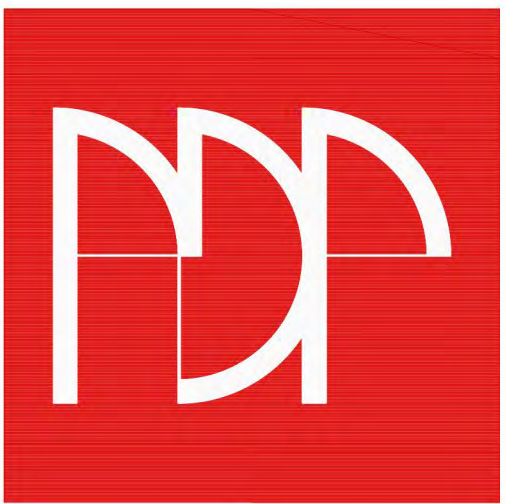
health & safety:
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scale width 50 mm @ a1 - 25 mm @ a3

revision	notes	date	drawn	checked
A	Drawing updated to comments	16.02.22	JF	HM
B	Drawing updated as per comments	10.03.22	JF	HM
C	PV panels added	20.04.22	JF	HM
D	Drawing updated as per comments	30.06.22	JF	HM

client

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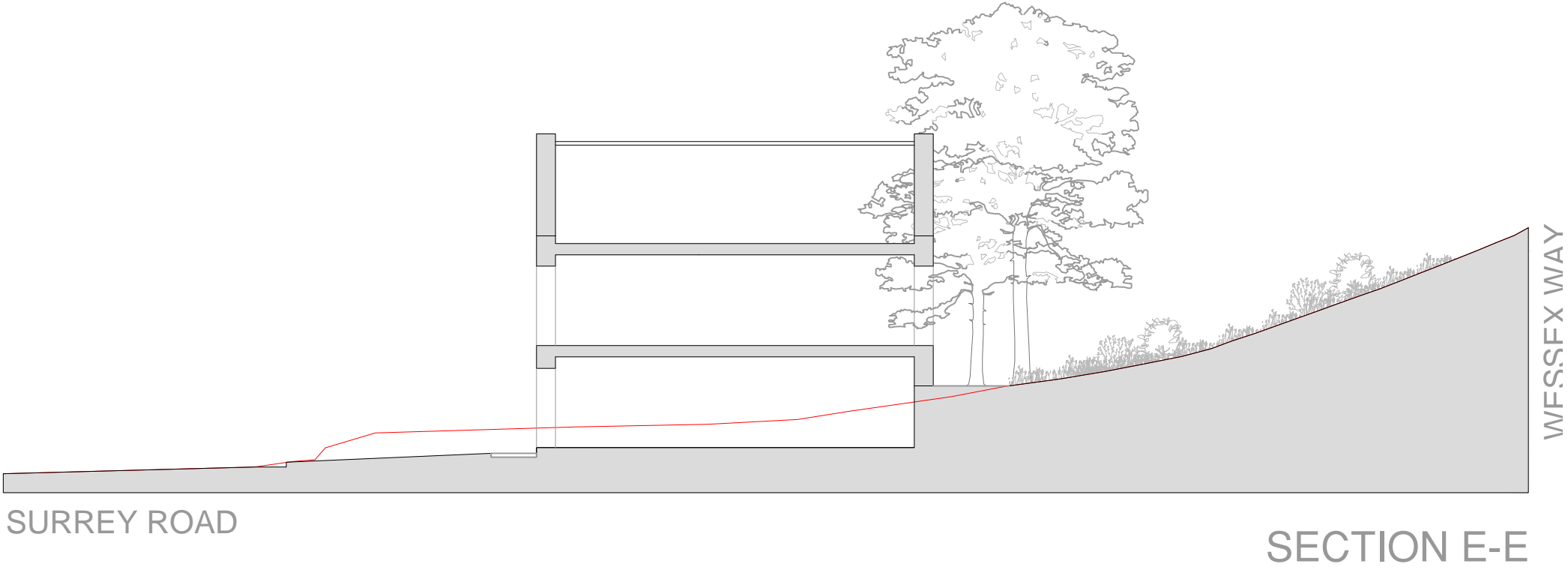
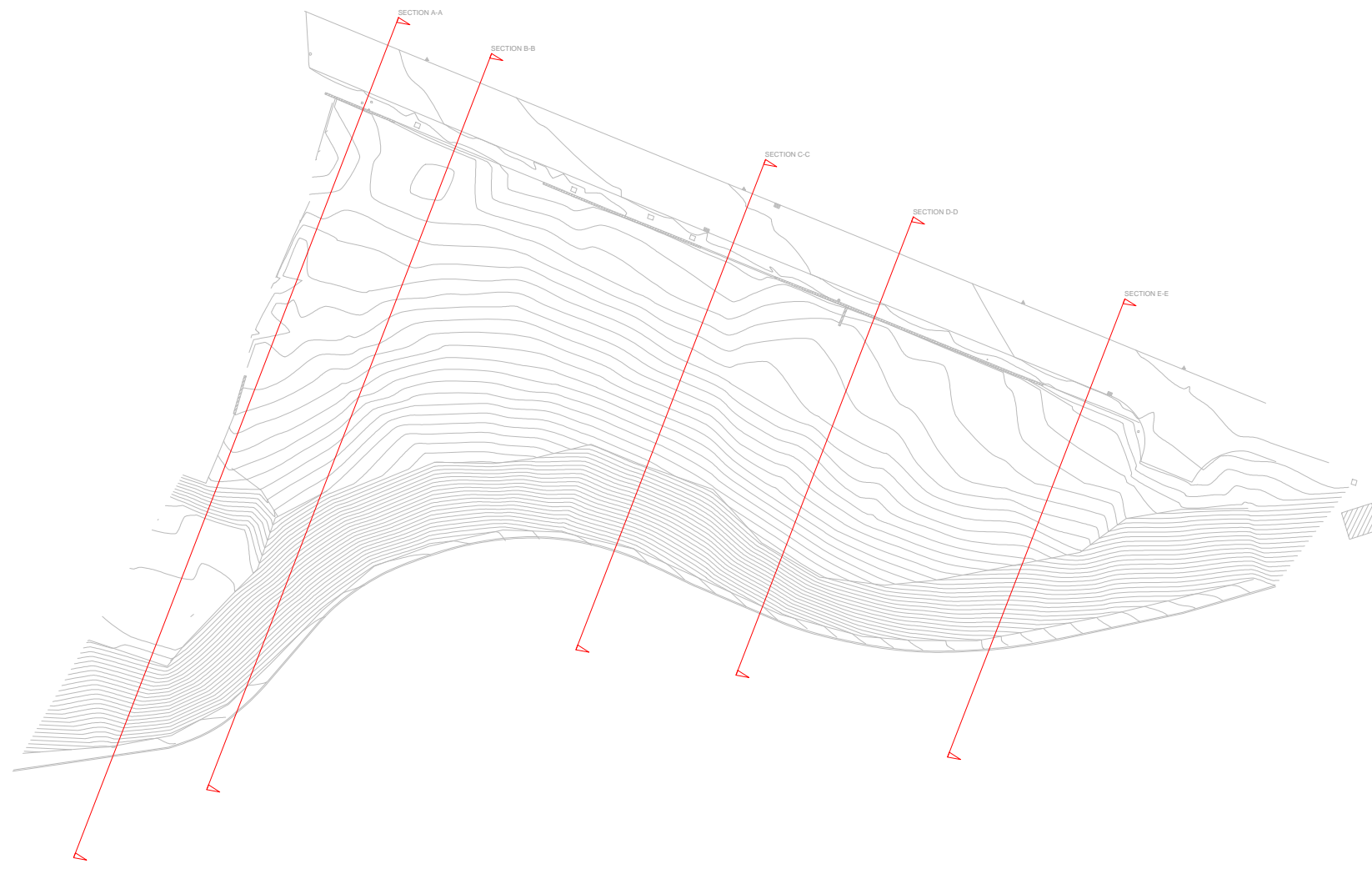
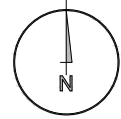
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tel 023 9248 1100
fax 023 9247 5050

email pdp@pdp-architects.co.uk

www.pdp-architects.co.uk

project	Land At Surrey Road Bournemouth BH4 9HW			
detail	Proposed Street Scene			
drawn	JF	checked	HM	
date	Jan 22	status	Planning	
a1 scale	1:100	a3 scale	1:200	rev 28127-PD113 D



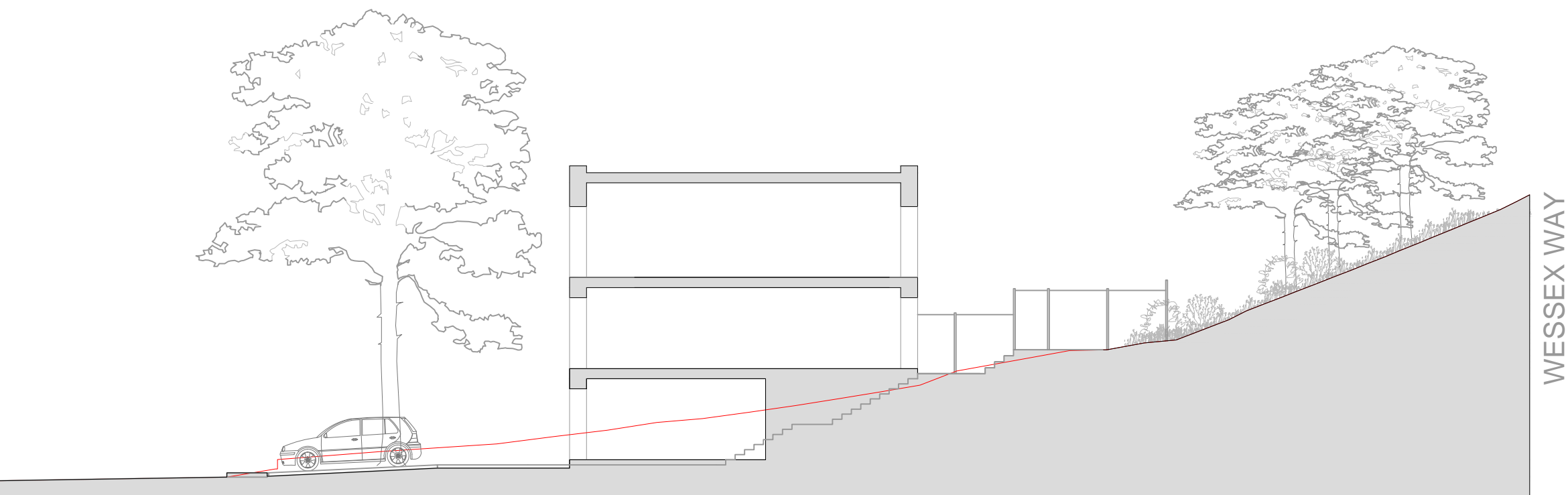
SECTION E-E



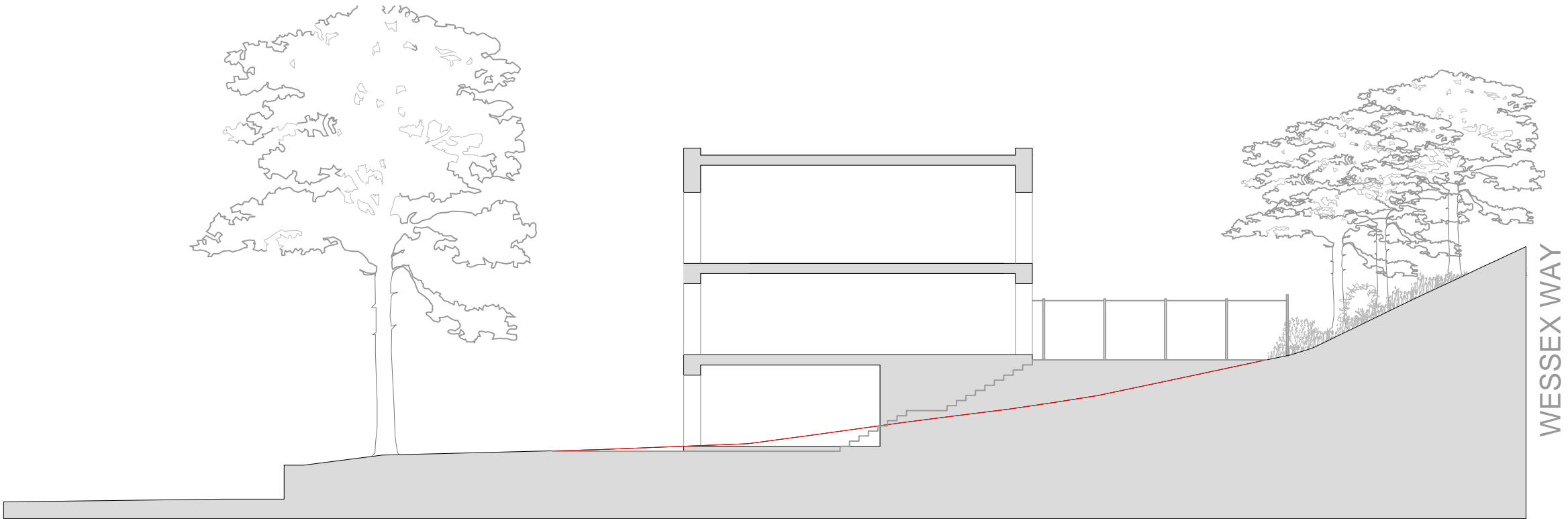
SECTION A-A



SECTION B-B

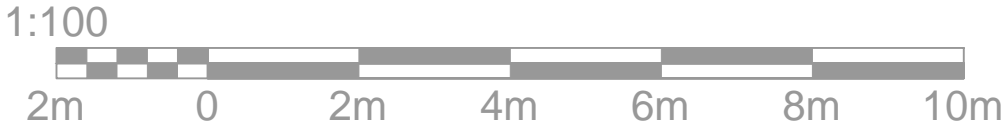


SECTION C-C



SECTION D-D

proposed sections [1:150@ A1]



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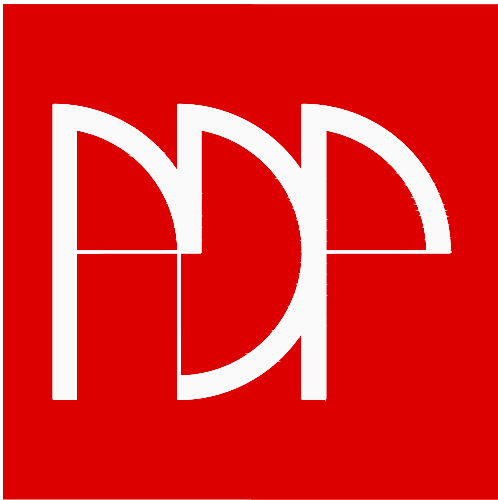
health & safety:
exceptional risks involving specific methods of construction or exceptional maintenance issues can be found within the designers risk assessment.

scale width 50 mm @ a1 - 25 mm @ a3

revision	notes	date	drawn	checked
A	Drawing updated as per comments	10.03.22	JF	HM
B	Drawing updated as per comments	30.06.22	JF	HM

client

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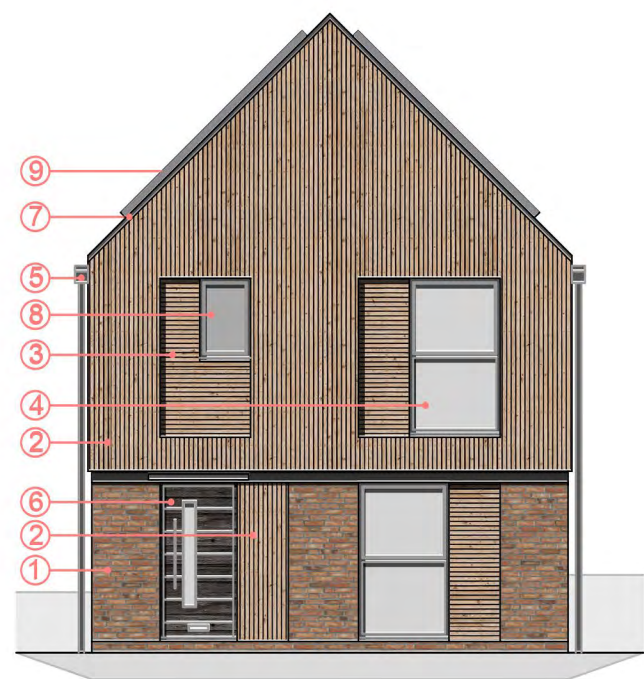
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fax 023 9247 5050
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project	Land At Surrey Road Bournemouth BH4 9HW		
detail	Proposed Site Sections		
drawn	JF	checked	HM
date	Jan 22	status	Planning
a1 scale	1:150	a3 scale	-
rev	28127-PD114	B	



north elevation
plot 8



east elevation
plot 8



south elevation
plot 8



west elevation
plot 8

Material Schedule

1. Red brick in stetcher bond
2. Vertical timber cladding
3. Horizontal timber cladding
4. Light grey windows
5. Dark grey rain water goods
6. Dark grey upvc door
7. Slate effect roofing
8. Frosted glazing
9. PV Panels



north elevation
plot 7

plot 6



east elevation
plot 6



south elevation
plot 6

plot 7



west elevation
plot 7



north elevation
plot 5

plot 4



east elevation
plot 4



south elevation
plot 4

plot 5



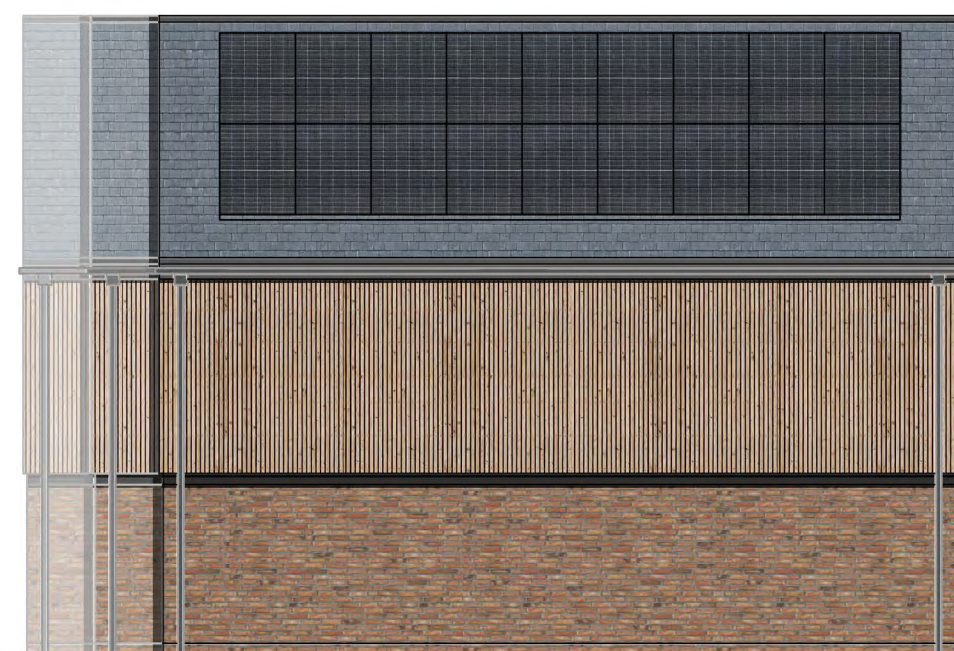
west elevation
plot 5



north elevation
plot 3

plot 2

plot 1



east elevation
plot 1



south elevation
plot 1

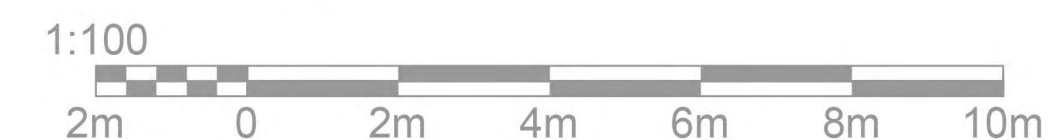
plot 2

plot 3



west elevation
plot 3

proposed elevations [1:100@ A1]



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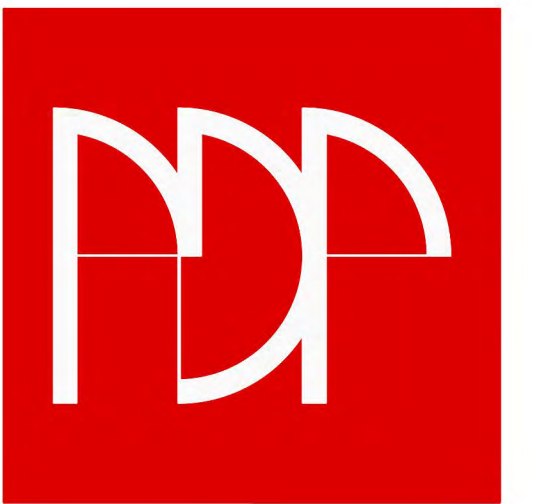
health & safety:
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scale width 50 mm @ a1 - 25 mm @ a3

revision	notes	date	drawn	checked
A	Drawing updated as per comments	10.03.22	JF	HM
B	PV panels added	20.04.22	JF	HM
C	Drawing updated to client comments	01.07.22	JF	HM

client

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project	Land At Surrey Road Bournemouth BH4 9HW		
detail	Proposed Elevations		
drawn	JF	checked	HM
date	Jan 22	status	Planning
a1 scale	1:100	a3 scale	1:200
			28127-PD115
			C



Health & Safety Assessment Tool

Completed by

Name	Peter friend
Business Unit	Housing Development
Date	15.07.2022

Please save this document to your computer and complete by entering your responses in the boxes provided. Information about the HASAT is available on BIZ within the Corporate H&S pages.

1	<u>Name of Project</u>
Development at Surrey Road Bournemouth	

2	<u>Project Number</u>

6	<u>Is this project notifiable under the CDM Regulations 2015</u>
YES	

7	<u>Aspects of the project</u> Please see the HASAT guidance template on the 2nd tab of this document.		
ITEM	YES	NO	COMMENTS
1 Risk Assessment	YES		The tender will contain a designers risk assessment highlighting any project specific risks to the contractors tendering for the work. A Construction Phase Health and Safety Plan including risk assessments and method statements will be submitted before the commencement of the construction phase.
2 Contractors	YES		Evidence of competence of the Principal Contractor should be provided. This should include any sub contractors.
3 Manual Handling	YES		As part of their CDM duty the Designer will try where practicable to design the project in a manner that reduces the potential of this hazard. Before construction works commence the Principal Contractor will be obliged to submit an examples of manual handling risk assessments.

4 Fire Safety Impacts	YES		As part of their CDM duty the designer will try where practicable to design the project in a manner that reduces the potential of this hazard. Fire service will be a consultee to the planning process. Fire Risk Assessment to be completed at practical completion.
5 Working at Heights	YES		As part of their CDM duty the designer will try where practicable to design the project in a manner that reduces the potential of this hazard. Before construction works commence the the Contractor will be obliged to submit a Construction Phase Health and Safety Plan which will include a risk assessments and method statements to address this hazard.
6 Accident recording	YES		Before construction works commence the the Principal Contractor will submit their arrangements for incident reporting.
7 CDM Notification to the HSE	YES		The Principal Contractor will notify the HSE of the project and forward evidence.
8 Requirement of continued monitoring	YES		Before construction works commence the the Contractor will be obliged to submit their arrangements for continued health monitoring.
9 Need for specialist equipment / tools	YES		As part of their CDM duty the designer will try where practicable to design the project in a manner that reduces the potential of this hazard. Please forward a list of any specialist equipment or tools needed for the construction including risk assessments and maintenace records.
10 Exposure to hazardous substances	YES		The Designer will where practicable, design the project in a manner that reduces the exposure to hazardous substances. Before construction works commence the Principal Contractor will be obliged to submit examples of COSHH assessments for substances that will be used in the construction.










8	Please provide a list of all persons, who have been consulted regarding H&S for this project
Employers Agent & Principle Designer - TBC. Architect - PDP Architects Principal Contractor - TBC. Building Control - LABC	

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

This is an interim report for a DIA that has been requested but yet to be completed.

If there is a RAG (coloured circle) that has not had its dependent field selected yet, it will appear as a white circle.

Impact Summary

Climate Change & Energy	Amber - Minor negative impacts identified / unknown impacts	
Communities & Culture	Green - Only positive impacts identified	
Waste & Resource Use	Amber - Minor negative impacts identified / unknown impacts	
Economy	Amber - Minor negative impacts identified / unknown impacts	
Health & Wellbeing	Green - Only positive impacts identified	
Learning & Skills		
Natural Environment	Yes	
Sustainable Procurement	Amber - Minor negative impacts identified / unknown impacts	
Transport & Accessibility	Amber - Minor negative impacts identified / unknown impacts	

Answers provided indicate that the score for the carbon footprint of the proposal is: **2**

Answers provided indicate that the carbon footprint of the proposal is:	Low	
---	------------	---

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Proposal ID: **263**

Proposal Title: **Surrey Road, Bournemouth, BH2 6AZ**

Type of Proposal: **Project**

Brief description:

Proposal for the development of 8 townhouses.

Proposer's Name: **Claire Lynch**

Proposer's Directorate: **Environment & Community**

Proposer's Service Unit: **Environment**

Estimated cost (£): **Between £25K and OJEU threshold**

If known, the cost amount (£): **circa £2.3 million**

Ward(s) Affected (if applicable):

Talbot & Branksome Woods

Sustainable Development Goals (SDGs) supported by the proposal:

1. No Poverty 3. Good Health and Well Being 7. Affordable and Clean Energy 8. Decent Work and Economic Growth 9. Industry, Innovation and Infrastructure 10. Reduced Inequalities 11. Sustainable Cities and Communities 12. Responsible Consumption and Production

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Climate Change & Energy

Is the proposal likely to have any impacts (positive or negative) on addressing the causes and effects of climate change? **Yes**

If the answer was No, then the explanation is below (in this case there are no answers to subsequent questions in this section):

- 1) Has the proposal accounted for the potential impacts of climate change, e.g. flooding, storms or heatwaves? **Yes**
- 2) Does it assist reducing CO2 and other Green House Gas (GHG) emissions? E.g. reduction in energy or transport use, or waste produced. **Yes**
- 3) Will it increase energy efficiency (e.g. increased efficiency standards / better design / improved construction technologies / choice of materials) and/or reduce energy consumption? **Yes**
- 4) Will it increase the amount of energy obtained from renewable and low carbon sources? **Yes**

How was the overall impact of the proposal on its ability to positively address the cause and effects of climate change rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

The development will provide highly energy efficient homes. It will help address the 2019 BCP Council declared Climate and Ecological Emergency and future proof the new homes against the 2025 Future Homes Standard for Housing. The development will contribute to the Council's commitment to achieving a net zero carbon emission target. Short-term emissions will be generated through the demolition of the existing building, materials supply chain and construction process. The successful contractors will be encouraged to minimise their environmental impact by use of sustainable procedures and processes.

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

We intend to build the scheme to the principles of the Passivhaus standard. This standard offers the benefit of very low carbon heating requirements and world leading levels of energy efficiency by not relying on fossil fuel heating systems. Further environmental assessments will be undertaken in later stages of procurement.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Communities & Culture

Is the proposal likely to impact (positively or negatively) on the development of safe, vibrant, inclusive and engaged communities? **Yes**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

- 1) Will it help maintain and expand vibrant voluntary and community organisations? **Yes**
- 2) Will it promote a safe community environment? **Yes**
- 3) Will it promote and develop cultural activities? **Don't know even though may be relevant**

How would the overall impact of the proposal on the development of safe, vibrant, inclusive and engaged communities be rated?

Green - Only positive impacts identified



Reasoning for the answer (details of impacts including evidence and knowledge gaps):

The housing scheme will bring many benefits to the residents and the wider community through the consideration of green space and provision of private amenity space for prospective residents to help create an attractive area which improves the local community.

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

Input on the scheme will be sought from Neighbourhood Management, Housing Delivery Enabling and Housing Options and Partnership teams, as well as Ward Councillors.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Waste & Resource Use

Is the proposal likely to have any impacts (positive or negative) on waste resource use or production and consumption? **Yes**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

- 1) Will it prevent waste or promote the reduction, re-use, recycling or recovery of materials? **Yes**
- 2) Will it use sustainable production methods or reduce the need for resources? **Yes**
- 3) Will it manage the extraction and use of raw materials in ways that minimise depletion and cause no serious environmental damage? **Don't know even though may be relevant**
- 4) Will it help to reduce the amount of water abstracted and / or used? **Yes**

How would the overall impact of the proposal on the sustainable production and consumption of natural resources be rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

Resources will be used and waste generated in the demolition of the existing buildings and construction of new homes. However, the high sustainability standards of the new housing will reduce resource use over the lifespan of the building, especially in regards to fossil fuels.

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

As above.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Economy

Is the proposal likely to impact (positively or negatively) on the area's ability to support, maintain and grow a sustainable, diverse and thriving economy? **Yes**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

- 1) Will the proposal encourage local business creation and / or growth?
Don't know even though may be relevant
- 2) Will the proposal enable local jobs to be created or retained?
Don't know even though may be relevant
- 3) Will the proposal promote sustainable business practices?
Don't know even though may be relevant

=How would the overall impact of the proposal on it's potential to support and maintain a sustainable, diverse and thriving economy be rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

Exact local impacts are unknown at this stage. There will be an economic benefit to the suppliers/ contractors involved in this scheme and use of local suppliers will be encouraged. Local retailers will benefit financially from low energy bills as a result of highly efficient building standards. We will work with the Council's Strategic Procurement Team regarding the letting of contracts.

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

We will work with the Council's Procurement Team regarding the letting of contracts.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Health & Wellbeing

Is the proposal likely to impact (positively or negatively) on the creation of a inclusive and healthy social and physical environmental for all? **Yes**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

- 1) Will the proposal contribute to improving the health and wellbeing of residents or staff?
Yes
- 2) Will the proposal contribute to reducing inequalities?
Yes
- 3) Will the proposal contribute to a healthier and more sustainable physical environment for residents or staff?
Yes

How would the overall impact of the proposal on the creation of a fair and healthy social and physical environmental for all be rated?

Green - Only positive impacts identified



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

The proposal is for the development of modern high quality and energy efficient homes. The high energy efficiency of the proposed new building will help alleviate the financial and mental stresses of fuel poverty. The proposed scheme gives careful consideration to wider issues such as ecology. It will provide both private and public amenity space for prospective residents to help create an attractive area which would have a positive impact on health and wellbeing.

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

Potential to undertake resident surveys to evidence improvements in health and wellbeing.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Learning & Skills

Is the proposal likely to impact (positively or negatively) on a culture of ongoing engagement and excellence in learning and skills? **No**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

No provision at this stage to support community learning and development or skill based learning. Opportunities to include provisions such as apprenticeships through the supply chain can be explored with the Strategic Procurement Team.

- 1) Will it provide and/or improve opportunities for formal learning?
- 2) Will it provide and/or improve community learning and development?
- 3) Will it provide and/or improve opportunities for apprenticeships and other skill based learning?

How would the overall impact of the proposal on the encouragement of learning and skills be rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Natural Environment

Is the proposal likely to impact (positively or negatively) on the protection or enhancement of local biodiversity or the access to and quality of natural environments?

Yes

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

- 1) Will it help protect and improve biodiversity i.e. habitats or species (including designated and non-designated)? **Yes**
- 2) Will it improve access to and connectivity of local green spaces whilst protecting and enhancing them? **Partially**
- 3) Will it help protect and enhance the landscape quality and character?
Yes
- 4) Will it help to protect and enhance the quality of the area's air, water and land?
Partially

How would the overall impact of your proposal on the protection and enhancement of natural environments be rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

As per recommendations in the Environmental Impact Assessment.

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

See Environmental Impact Assessment.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Sustainable Procurement

Does your proposal involve the procurement of goods, services or works? **Yes**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

Has or is it intended that the Strategic Procurement team be consulted?

Yes – already underway

If the Strategic Procurement team was not consulted, then the explanation for this is:

- 1) Do the Government Buying Standards (GBS) apply to goods and/or services that are planned to be bought?

Yes

- 2) Has sustainable resource use (e.g. energy & water consumption, waste streams, minerals use) been considered for whole life-cycle of the product/service/work?

Yes

- 3) Has the issue of carbon reduction (e.g. energy sources, transport issues) and adaptation (e.g. resilience against extreme weather events) been considered in the supply chain?

Yes

- 4) Is the product/service fairly traded i.e. ensures good working conditions, social benefits e.g. Fairtrade or similar standards?

Not Relevant

- 5) Has the lotting strategy been optimised to improve prospects for local suppliers and SMEs?

Don't know even though may be relevant

- 6) If aspects of the requirement are unsustainable then is continued improvement factored into your contract with KPIs, and will this be monitored?

Don't know even though may be relevant

How is the overall impact of your proposal on procurement which supports sustainable resource use, environmental protection and progressive labour standards been rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

Procurement exercises for the supply of goods and services yet to be undertaken - impacts unknown at this stage.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Details of proposed mitigation/remedial action and monitoring (inc. timescales, responsible officers, related business plans etc):

Ongoing liaison with the Strategic Procurement Team.

Proposal Title: Surrey Road, Bournemouth, BH2 6AZ

Transport & Accessibility

Is the proposal likely to have any impacts (positive or negative) on the provision of sustainable, accessible, affordable and safe transport services - improving links to jobs, schools, health and other services? **Don't Know**

If the answer was No, then the explanation is below (there are no answers to subsequent questions in this section):

- 1) Will it support and encourage the provision of sustainable and accessible modes of transport (including walking, cycling, bus, trains and low emission vehicles)?

Yes

- 2) Will it reduce the distances needed to travel to access work, leisure and other services? **Don't know even though may be relevant**

- 3) Will it encourage affordable and safe transport options?

Yes

How would the overall impact of your proposal on the provision of sustainable, accessible, affordable and safe transport services be rated?

Amber - Minor negative impacts identified / unknown impacts



The reasoning for the answer (details of impacts including evidence and knowledge gaps):

The scheme will include the provision of cycle storage and encourage the use of low emission vehicles by providing charging points for electric vehicles. There are bus stops just outside and close to the development site. Local amenity facilities, education and retail centres are accessible on foot for able bodied people. The location of the scheme may enable residents to rely less on personal transport to access their places of work.

Details of proposed mitigation and monitoring (inc. timescales, responsible officers, related business plans etc):

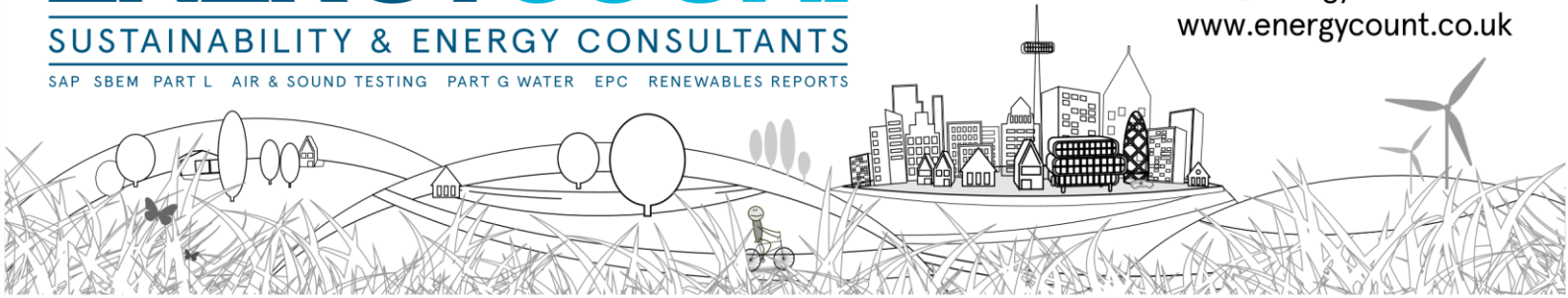
Impacts dependent on the scale of sustainable travel provisions and circumstances of the residents.

Surrey Road



RAG rating	G
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[illegible]



CARBON REDUCTION STATEMENT

PROJECT: Land at Surrey Road, Bournemouth BH4 9HW

CLIENT: BCP Council

PROJECT REF: 0292-0222-01

DATE: 15 March 2022

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2.0 - Energy Requirements

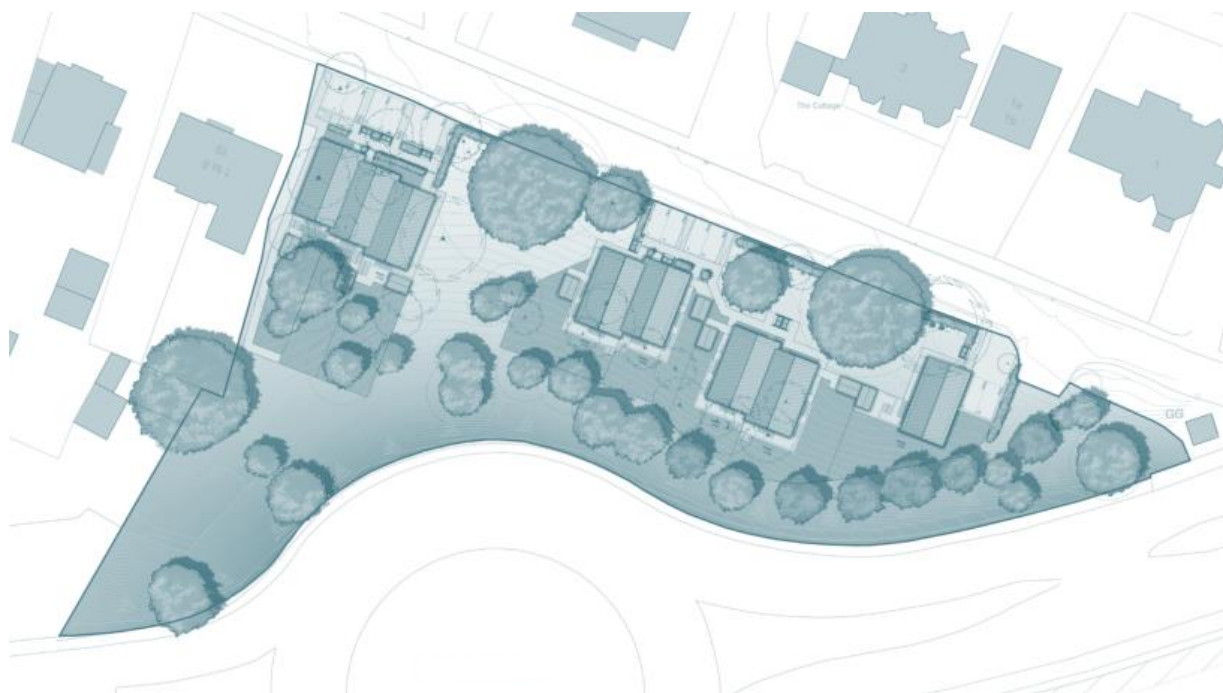
3.0 - Energy Hierarchy

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1.0 – INTRODUCTION



The development at Surrey Road consists of the construction of 8 energy efficient houses.

As part of its commitment to reduce CO₂ emissions in the conurbation BCP Council declared a Climate & Ecological Emergency in July 2019. On the back of this the new BCP local plan is being developed to help achieve a reduction in CO₂ emissions in new developments across the conurbation. The existing local plan was adopted in October 2012 and is out-of-date¹ in planning terms.

The current Policy CS2 of the Core Strategy requires that all developments must have at least 10% of their energy demand come from decentralised and renewable or low carbon sources, unless this is demonstrated to be unfeasible or unviable.

The proposed development at Surrey Road will be built to Passivhaus standards using a fabric-first approach that will exceed Building Regulations by a large margin.

The purpose of this report is to show how the fabric-first Passivhaus approach will provide a significant CO₂ emissions reduction across the development compared to the same buildings if it were built to current Building Regulations requirements.

¹ Refer to Appendix A

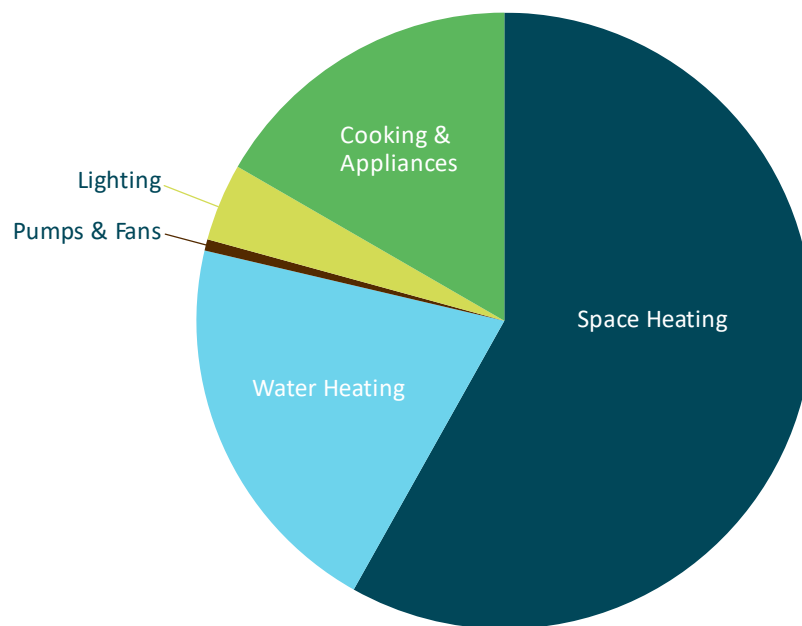
2.0 - ENERGY REQUIREMENTS

Energy efficiency first

The largest proportion of energy demand of a typical dwelling built to current regulations is from space and water heating.

Figure 2.1 below shows the energy split of a typical dwelling built to comply with Building Regulations.

Figure 2.1



It is good practice therefore to reduce the overall energy demand of a dwelling by utilising a low energy design approach.

Using a fabric-first approach, the space heating demand of a dwelling is brought closer to zero due to the high levels of thermal insulation and air tightness.

Low energy design involves the consideration and implementation of measures to reduce the energy requirement of a dwelling. This can be achieved by:

- Improving levels of insulation to reduce heat loss through the fabric of the building.
- Use of low-energy technologies, e.g. low-energy lighting, energy efficient heating systems & appliances.
- Use of passive solar design.

3.0 - ENERGY HIERARCHY

Be Lean, Be Clean, Be Green.

When designing a building it is advisable to follow an Energy Hierarchy. The primary aim is to make the building as energy efficient as possible in order to reduce the demand for energy, and thus CO₂ emissions.

Building Regulations 2013 Part L aims to reduce CO₂ emissions from new buildings by 6% compared to those built to 2010 regulations. This can be achieved by making improvements to the fabric of the building by increasing levels of insulation, increasing air tightness and the use of efficient heating & appliances. CO₂ emissions can be further reduced by using renewable or low-carbon energy sources.

In order to reduce the regulated CO₂ emissions of the proposed development the principle is to follow the energy hierarchy:

1. Use less energy – energy efficient measures, air tightness, passive solar, low energy design
2. Use renewable & low-carbon energy sources and/or other technologies

Use less energy

Areas of consideration in order to improve the efficiency of the fabric of a dwelling:

- Increased insulation to main thermal elements (roof, walls, floor, glazing)
- Reduce thermal bridging to near-zero
- Improved air tightness

Other areas for improvement:

- Efficient heating & hot water systems
- Improved heating & lighting controls
- Controlled ventilation
- Energy efficient lighting
- Energy efficient appliances (cooker, washing machine, fridges, etc.)

1. Use less energy

The proposed minimum Building Fabric specification for the development will be as follows:

Element	Proposed u-value (Passivhaus spec) (W/m ² K)	Maximum allowed by Building Regulations Part L1A (W/m ² K)
Walls	0.12	0.30
Floor	0.12	0.25
Roof	0.11-0.12	0.20
Glazing	0.8	2.0
Air tightness	1.0 ²	10.0

2. Use renewable & low carbon energy sources and/or other technologies

It is proposed that MVHR whole-house ventilation systems are used in each dwelling. MVHR extracts heat from expelled air and uses it to pre-warm incoming fresh air.

² Air tightness (or air permeability) is measured differently in Building Regulations and Passivhaus. Passivhaus uses the n50 methodology, which requires an air change/hour (ACH) rate of 0.6. An n50 result of 0.6 ACH is roughly equivalent to a 1.0 using the q50 methodology used by Building Regulations.

4.0 - METHODOLOGY

Project Appraisal

BCP Council impose a condition on all new dwellings that requires a 10% reduction in Energy Demand from renewable or low carbon sources. The 10% energy demand reduction requirement in the out-of-date Bournemouth Local Plan is a noble intention, but too simplistic a tool in practice.

Under the out-of-date local plan there is no requirement for a dwelling to exceed Building Regulations, just that the energy demand is reduced by 10% using renewable or low-carbon sources. This makes it possible to build an inefficient building that fails to meet Building Regulations Part L , which only passes with the addition of renewables.

Using a fabric-first approach can achieve a decent Building Regulations pass without the need for renewables.

The proposed development will be built to Passivhaus standard using a fabric-first approach that will greatly exceed Building Regulations.

The latest Design SAP software has been used to determine CO₂ emissions for the development.

5.0 – FINDINGS (Energy Demand)

Table 5.1 Benchmark Calculations (Base spec) & Base spec + PV

Plot	Space Heating (kWh/year)	Water Heating (kWh/year)	Pumps & Fans (kWh/year)	Lighting (kWh/year)	Base Spec Total (kWh/year)	Qty of Solar PV to pass (kW)	PV Contribution (kWh/year)	TOTAL with PV (kWh/year)
1	3909.7	1990.5	246.5	436.9	6583.6	3.0	1927.7	4655.9
2	3077.3	1990.5	246.5	436.9	5751.1	2.0	1285.1	4466.0
3	3897.6	1990.5	246.5	428.9	6563.3	3.0	1927.7	4635.7
4	4819.8	2023.2	283.2	462.4	7588.6	3.6	2313.2	5275.4
5	4686.1	2023.2	283.2	462.4	7455.0	3.5	2249.0	5206.0
6	4819.8	2023.2	283.2	462.4	7588.6	3.6	2313.2	5275.4
7	4686.1	2023.2	283.2	462.4	7455.0	3.5	2249.0	5206.0
8	4645.4	1990.5	246.5	406.9	7289.2	3.5	2249.0	5040.2
					56,274.4			39,760.7

Table 5.1 shows that the dwellings, if built to the base specification (Building Regulations pass) have a total energy demand of 56,274.4 kWh/year.

With solar PV the total energy demand of the development reduces to 39,760.7 kWh/year, which represents a 29.3% reduction.

Table 5.2 Proposed Specification (Passivhaus)

Plot	Space Heating (kWh/year)	Water Heating (kWh/year)	Pumps & Fans (kWh/year)	Lighting (kWh/year)	TOTAL (kWh/year)
1	726.3	1990.5	246.5	436.9	3400.1
2	484.9	1990.5	251.3	436.9	3163.6
3	715.8	1990.5	246.5	428.9	3381.6
4	1046.4	2023.2	283.2	462.4	3815.3
5	954.2	2023.2	283.2	462.4	3723.0
6	1046.4	2023.2	283.2	462.4	3815.3
7	954.2	2023.2	283.2	462.4	3723.0
8	939.5	1990.5	246.5	406.9	3583.3
					28,605.2

Table 5.2 shows that the dwellings, if built to the proposed Fabric-First Passivhaus specification have an energy demand of 28,605.2 kWh/year.

This represents the following energy demand reductions:

- a 49.2% energy demand reduction over the base specification $[1-(56,274.4/28,605.2)] \times 100$
- a 28.1% energy demand reduction over the base specification + PV $[1-(39,760.7/28,605.2)] \times 100$

5.0 – FINDINGS (CO₂ Emissions)

Table 5.3 Benchmark Calculations (Base spec)

Block Compliance Report - DER					
Block Reference: 0292-0222-01		Block Name: Surrey Road			
Property-Assessment Reference	Multiplier	Floor Area (m ²)	DER (kgCO ₂ /m ²)	TER (kgCO ₂ /m ²)	% DER/TER
0292-0222-01_01-BASE	1	100.6	33.96	24.84	-36.73 %
0292-0222-01_03-BASE	1	100.6	33.86	24.71	-37.01 %
0292-0222-01_02-BASE	1	100.6	29.67	23.08	-28.54 %
0292-0222-01_08-BASE	1	100.6	37.61	26.03	-44.48 %
0292-0222-01_04-BASE	1	113.2	34.79	24.41	-42.52 %
0292-0222-01_06-BASE	1	113.2	34.79	24.41	-42.52 %
0292-0222-01_05-BASE	1	113.2	34.18	23.96	-42.64 %
0292-0222-01_07-BASE	1	113.2	34.18	23.96	-42.64 %
Totals:	8	855.2	273.04	195.41	
Average DER = 34.15 kgCO ₂ /m ²		% DER/TER	FAIL		
Average TER = 24.41 kgCO ₂ /m ²		-39.90 %			

Table 5.3 shows CO₂ emissions of the dwellings if built to a typical specification with electric heating. The average DER is 34.15 kgCO₂/m², which for Building Regulations purposes represents a –39.90% fail.

The base spec used for the benchmark calculations is as follows:

Walls = 0.20 W/m ² K	(Building Regulations Part L limit = 0.30 W/m ² K)
Floor = 0.15 W/m ² K	(Building Regulations Part L limit = 0.25 W/m ² K)
Roof = 0.11 W/m ² K	(Building Regulations Part L limit = 0.20 W/m ² K)
Glazing = 1.5 W/m ² K	(Building Regulations Part L limit = 1.6 W/m ² K)
Air tightness (q50) = 5.0 m ³ /hr/m ²	(Building Regulations Part L limit = 10.0 m ³ /hr/m ²)

Table 5.4 Benchmark Calculations with renewables (Base spec + PV)

Block Compliance Report - DER					
Block Reference: 0292-0222-01		Block Name: Surrey Road			
Property-Assessment Reference	Multiplier	Floor Area (m ²)	DER (kgCO ₂ /m ²)	TER (kgCO ₂ /m ²)	% DER/TER
0292-0222-01_01-BASE+PV	1	100.6	24.54	24.84	1.20 %
0292-0222-01_02-BASE+PV	1	100.6	23.04	23.08	0.18 %
0292-0222-01_03-BASE+PV	1	100.6	23.92	24.71	3.21 %
0292-0222-01_04-BASE+PV	1	113.2	24.19	24.41	0.91 %
0292-0222-01_05-BASE+PV	1	113.2	23.87	23.96	0.38 %
0292-0222-01_06-BASE+PV	1	113.2	24.19	24.41	0.91 %
0292-0222-01_07-BASE+PV	1	113.2	23.87	23.96	0.38 %
0292-0222-01_08-BASE+PV	1	100.6	26.00	26.03	0.12 %
Totals:	8	855.2	193.62	195.41	
Average DER = 24.19 kgCO ₂ /m ²		% DER/TER	PASS		
Average TER = 24.41 kgCO ₂ /m ²		0.90 %			

Table 5.4 shows CO₂ emissions of the dwellings if built to the same typical specification with electric heating, plus 3-3.6kW of Solar PV per dwelling to achieve a pass. The average DER is 24.19 kgCO₂/m², which for Building Regulations purposes represents a 0.90% pass.

Tables 5.3 & 5.4 represent dwellings built to a specification that is typical in the industry today. The specification exceeds the limits set in Building Regulations Part L, yet still requires some renewables to pass the CO₂ emissions requirement of Part L.

The fabric-first Passivhaus specification

The proposed dwellings will be built to Passivhaus standards, with the following specification:

Walls = 0.12 W/m ² K	(Building Regulations Part L limit = 0.30 W/m ² K)
Floor = 0.12 W/m ² K	(Building Regulations Part L limit = 0.25 W/m ² K)
Roof = 0.11/0.12 W/m ² K	(Building Regulations Part L limit = 0.20 W/m ² K)
Glazing = 0.8 W/m ² K	(Building Regulations Part L limit = 1.6 W/m ² K)
Air tightness (q50) = 1.0 m ³ /hr/m ²	(Building Regulations Part L limit = 10.0 m ³ /hr/m ²)

Part of the Passivhaus specification requires that thermal bridges are largely designed out, making for an extremely well insulated and airtight thermal envelope.

Table 5.5 Calculations (Passivhaus spec)

Block Compliance Report - DER					
Block Reference: 0292-0222-01		Block Name: Surrey Road			
Property-Assessment Reference	Multiplier	Floor Area (m ²)	DER (kgCO ₂ /m ²)	TER (kgCO ₂ /m ²)	% DER/TER
0292-0222-01_01-Passivhaus	1	100.6	17.54	24.84	29.38 %
0292-0222-01_03-Passivhaus	1	100.6	17.45	24.71	29.39 %
0292-0222-01_02-Passivhaus	1	100.6	16.32	23.29	29.94 %
0292-0222-01_08-Passivhaus	1	100.6	18.49	26.03	28.97 %
0292-0222-01_04-Passivhaus	1	113.2	17.49	24.41	28.35 %
0292-0222-01_06-Passivhaus	1	113.2	17.49	24.41	28.35 %
0292-0222-01_05-Passivhaus	1	113.2	17.07	23.96	28.76 %
0292-0222-01_07-Passivhaus	1	113.2	17.07	23.96	28.76 %
Totals:	8	855.2	138.92	195.62	
Average DER = 17.36 kgCO ₂ /m ²		% DER/TER	PASS		
Average TER = 24.44 kgCO ₂ /m ²		28.97 %			

Table 5.5 shows CO₂ emissions of the dwellings if built to the Fabric-First Passivhaus specification with electric heating. The average DER is 17.36 kgCO₂/m², which for Building Regulations purposes represents a 28.97% pass.

CO₂ EMISSIONS (TONNES/YEAR)

The following table shows CO₂ emissions reductions achieved:

Total Floor Area = 855.2m²

CO₂ emissions = Average DER x Total Floor Area (then divided by 1,000 to convert kg to tonnes)

Table 5.6 Calculated CO₂ emissions (tonnes/year)

Base Spec + PV	Proposed (Passivhaus) spec	Difference (Base spec vs Passivhaus Spec)
20.69	14.85	5.84

Table 5.6 shows that by building to the Fabric-First Passivhaus spec would reduce CO₂ emissions by 5.84 tonnes/year.

BUILD COSTS vs CO₂ EMISSIONS.

Estimated Build Costs

Table 5.7 Estimated build cost (building costs excluding external works)

Proposed Passivhaus Build spec	'Normal' spec (10% less, assumed)	Difference
(£)	(£)	(£)
1,608,558	1,447,702	160,856

CO₂ emissions over 75 years

Table 5.8 CO₂ emissions over 75 years for the development

Specification	CO ₂ emissions (tonnes)	CO ₂ emissions over 75 years (tonnes)	Different in CO ₂ emissions over base spec over 75 years (tonnes)	CO ₂ emissions reduction (%)
Base spec	20.7	1,551.5		
Proposed (Passivhaus) spec	14.8	1,113.5	438.1	28.2

Calculation of Cost vs CO₂ Emissions saving

Table 5.9 Cost per tonne of CO₂

	Extra cost to build to proposed specification (£)	Different in CO ₂ emissions over base spec + PV over 75 years (tonnes)	Cost per extra tonne of CO ₂ saved over 75 years (£)
8x new dwellings	160,856	438.1	367.17

Table 5.9 shows the monetary cost per tonne of CO₂ emissions saved by using the proposed specification over the base 'Building Regulations' specification as follows:

438.1 tonnes of CO₂ emissions are saved by the development when built to the Passivhaus specification. This equates to a monetary cost of £367.17 per tonne of CO₂ saved.

6.0 - CONCLUSIONS

Although it is possible to achieve a Building Regulations Part L pass with a significant quantity of renewables (i.e. 2+ kW of solar PV per dwelling), the CO₂ emissions of the development would exceed that of the same building if it were built to Passivhaus standard.

The metric of energy demand reduction from renewables in the out-of-date Bournemouth Local Plan, whilst worthy, does not provide as significant a CO₂ emissions reduction as if the same building were built to the Fabric-First Passivhaus standard.

If built to Passivhaus standard the development at Surrey Road would produce around 28% less CO₂ emissions and have a 28% lower energy demand than the same development if it were built to comply with Building Regulations Part L1a.

Findings show that building to the Fabric-First Passivhaus specification reduces CO₂ emissions of the development by 438.1 tonnes/year over the Building Regulations-compliant Base Spec with solar PV.

ADDENDUM - Trees

Over 75 years the Fabric-First Passivhaus specification would reduce CO₂ emissions over a Building Regulations compliant specification by 438.1 tonnes.

By comparison, a typical tree will absorb up to 1 tonne of CO₂ over 100 years, which equates to around 0.75 tonnes over 75 years.

A simple calculation shows that the CO₂ emissions reduction provided by the proposed specification is equivalent to planting **584 trees** (i.e. 438.1/0.75).

APPENDIX A

Paragraph 11 of the National Planning Policy Framework (2019) [NPPF] states that:

“Plans and decisions should apply a presumption in favour of sustainable development”. For decision-taking this means (..) where there are no relevant development plan policies, or the policies which are most important for determining the planning application are out-of-date, granting permission unless:

- (i) The application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed, **or**
- (ii) Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this framework taken as a whole.

‘Out-of-date means “that when a local authority cannot demonstrate a five year supply of deliverable sites (with the appropriate buffer); **or** where the Housing Delivery Test indicates that the delivery of housing was substantially below (less than 75%) of the housing requirement over the three years”. In terms of the term ‘particular importance’ this includes “heritage assets which includes a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest”.

The Housing Delivery Test (HDT) was introduced into national policy through the NPPF. The purpose of the HDT is to monitor local authority housing delivery against local requirements and to ensure that measures are taken to improve delivery where required. Where housing delivery falls below 95% of the local requirement (over the proceeding 3 financial years), an action plan must be prepared to identify measures to improve delivery and a buffer of 20% must be added to the 5-year housing land supply.

The first HDT measurement was published in February 2019 and was measured against the housing requirements set out in the adopted Local Plan for each former local authority area. *Table 1: HDT of the Housing Delivery Action Plan* shows that all former local authority areas failed to meet the housing delivery levels of 95%. For the Bournemouth area, the housing target was for 2,353 dwellings to be development from 2015/16 to 2017/18, with only 1,970 dwellings actually delivered thus equating to 84%. This means that outside of publishing an action plan, a 20% buffer was applied to the 5-year housing land supply.

Of particular interest, from 2019/20 onwards the housing requirement in Bournemouth steps up hugely from 730 to 1,422 dwellings per annum with the transition to the government’s standard methodology. This step change in housing requirement presents a significant challenge in relation to housing delivery and housing land supply. The results for HDT for 2019 was recently published by the Government (February 2020) and Bournemouth HDT measurement is 66% (total number of homes required is 3,064 dwellings a year, and the number of homes delivered is 2,010 dwellings) . Although the 2020 results will be published in February 2021, it is likely that the HDT will be significantly below 75% due to COVID. Thus, it could be argued that the average HDT for Bournemouth is substantially less than 75% for the proceeding three years, thus the policies which are most important for determining the planning application are out-of-date.

Five Year Housing Land Supply:

The Bournemouth Area Strategic Land Availability Assessment (2019) [SHLAA] provides information on the land available in the local authority area. The SHLAA is part of the Local Plan’s evidence base and is required by the NPPF. The SHLAA should plan for a supply of specific, deliverable sites for years one to five of the plan period and specific, deliverable sites or broad locations for growth for years six to ten and where possible years 11-15 of the plan. *Table 1: Sites Identified by types for year 1-5 (April 2019 to March 2024)* of the SHLAA shows that Bournemouth can only demonstrate a land supply of 2.9 years.

As stated in paragraph 9.8 of the SHLAA, due to the government’s change in approach to calculating housing need and supply, BCP Council for the Bournemouth area cannot demonstrate a 5-year supply against the local housing need figure derived from the 2014 Household Projections plus the 20% buffer required by the results of the 2018 Housing Delivery Test. “As a consequence, the presumption in favour of sustainable development as laid out in paragraph 11 of the NPPF now applies in the area of BCP Council covered by the Bournemouth Local Plan – Core Strategy”.