

Mitigation Area Creation, Management and Monitoring Strategy



Site:	Harbour Place, Bedhampton
Client:	Barratt David Wilson Homes
Job Number:	A108712
Survey Type(s):	Mitigation Area Creation, Management and Monitoring Strategy
File Location:	I:\Projects\Projects A108000 on\A108712 Harbour Place\REPORTS

1.0 Introduction

1.1 Background

WYG were commissioned by Barratt David Wilson Homes to prepare a detailed strategy for the establishment, management and monitoring of the proposed Winter Bird Mitigation Area as part of the approved development at Harbour Place (see WYG, 2019¹).

This is intended to fulfil the requirements of the Section 106 Agreement and discharge Condition 7 of the Outline planning consent.

The Site encompasses H04B and H04C which have been monitored for the presence of brent geese as part of the Solent Waders and Brent Goose Strategy. H04B is also listed as a SINC - Forty Acres Farm B – designated due to the historic presence of large numbers of brent geese. Using the latest data from winter bird surveys across the Solent (which incorporates spatial considerations such as movements rather than just numbers), H04B has been listed as 'low use' and H04C as a 'secondary support site'.

It is proposed that the majority of H04C is enhanced and managed in perpetuity for brent geese over the winter period. Dark-bellied brent geese are a qualifying feature of the Chichester and Langstone Harbours SPA, along with a broader assemblage of wading birds.

1.2 Baseline

The site has been monitored as part of the Solent Waders and Brent Goose Strategy and is identified as Fields H04B and H04C for the purposes of the study.

Using the latest data from winter bird surveys across the Solent (which incorporates spatial considerations such as movements rather than just numbers), H04B has been listed as 'low use' and H04C as a 'secondary support site'. These surveys recorded a peak count of 50 brent geese within H04C and none within H04B (HBIC, 2018).

Wintering bird surveys were undertaken at the site by Havant Borough Council between the years 2012-2015. The survey time was three hours around high tide for three days every month from November to March and consisted of 11 visits to Forty Acre Farm.

¹ WYG, (2019). Land at Forty Acre Farm, Havant Road, Havant: Winter Bird Mitigation Strategy.

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No brent geese were recorded utilising the survey area during this period. Two lapwing were observed in the western extent of Forty Acre Farm. These were observed in January so this does not confirm breeding at the site.

WYG wintering bird surveys undertaken between October 2015 and March 2016 recorded small number of brent geese were feeding on the southern extent of the site, west of the industrial area. Red listed curlew were noted along the south eastern extent of the site in the clover ley field, as well as two noted west of the industrial area in the clover ley. Amber listed oystercatcher were noted on two occasions feeding along the southern boundary of the site, west of the industrial area, as well as seen feeding east of the industrial area in the clover ley field.

1.3 Mitigation Summary

H04C is currently listed as a Secondary Support Area for brent geese under Policy E17 of the Draft Havant Local Plan. The mitigation strategy is to secure this area in perpetuity and enhance its foraging habitat creating a mitigation area measuring 4.85 ha.

2.0 Methodology

2.1 A – Fencing

The first action is to install exclusion fencing to protect the mitigation area during construction. This will be installed as per the fencing plan, Figure 1.

The central portion of the site will comprise a permanent close-board timber acoustic fence along the line of the final plot boundaries, and will also form the final boundary fence along the eastern edge of the mitigation area.

North and south of the permanent fence, temporary acoustic fencing will be installed comprising Heras (or similar temporary fencing) with acoustic membrane affixed.

Following the installation of the fencing, a sign-off inspection will be completed by the developer's ecologist and the HCC Ecologist and/or Natural England.

2.2 B – Decoys

To maximise the likelihood of uptake by geese following the improvement works to the mitigation area, 6 no. brent goose decoys (based on available package size) will be installed within the southern portion of the mitigation area. These will be placed by the developer's ecologist near the centre of the mitigation area with good sightlines. No maintenance requirement is anticipated but the decoys will be replaced if they are lost within the first three years following establishment.

2.3 C – Wader Scrapes

To improve the habitat suitability for other wading birds (either qualifying species for the SPA or part of the qualifying assemblage) three wader scrapes will be created within the mitigation area. These will be of irregular shape with an average area of 50m². To create a range of conditions and support different species the scrapes will be of variable depth with shallow margins and a deeper centre of 0.5m depth. Water supply for the scrapes will come from rainfall and surface water runoff.

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The primary objective is to hold perched water during the winter, but it is anticipated that deeper areas will also hold water for part of the summer and provide an enhancement for breeding birds. The deeper central section of the scrape will occupy approximately 50% of the total area to maximise the likelihood of water retention. Scrapes will be created using an excavator with arisings piled adjacent to the margins to improve water retention and provide bare ground areas suitable for invertebrates.

Locations of scrapes will be chosen by the developers ecologist by observing ground conditions during winter monitoring surveys in 2019/20 and 2020/21. The developers ecologist will then supervise the scrape construction. If necessary following observations of water perching, the scrapes will be constructed with a compacted clay liner to aid water retention.

2.4 D – Site Preparation

Vegetation Clearance

The former arable fields within the mitigation area will be flailed to ground-level to remove existing vegetation and dead growth. This will be using a tractor-mounted flail and will take place as early as possible in 2021 once the local brent goose population has migrated.

Soil Preparation

These areas will then be prepared for seeding using a disc harrow to a maximum of 150 mm depth to prevent fertile soil being moved below root depth. If necessary, a chain harrow will be used to remove arisings from flailing and prevent smothering of seedlings (this will also help seed-to-soil contact).

Sowing

The seed mix to be sown will be a suitable grazing mix dominated by hard-wearing grasses (e.g. perennial rye grass *Lolium perenne*) and a minimum of 10% white clover *Trifolium repens*.

Seeding will take place by broadcast at a density of approximately 18 kg/ha. Seed should be sown within 10 mm of the soil surface.

Due to the inclusion of a high density of white clover in the seed mix, it is not considered necessary to include artificial fertiliser application.

Consolidation

Following sowing, the seed bed will be rolled. This will improve seed-to-soil contact, moisture retention and will minimise establishment of pest species.

Cutting

The grassland will be left to establish and prior to the winter of 2021/22 the established grassland will be cut to a height of 60 mm ready for grazing by geese.

2.5 E – Install Hedgerow

Planting of hedgerow plants will take place during the suitable planting season (typically November – February) but will be preceded by a toolbox talk given by the developer's ecologist to minimise

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disturbance of wintering birds. This will include the length of hedgerow adjacent to the proposed temporary acoustic barrier.

Hedgerow planting is set out on the Landscape Proposals plan (Covey Design drawing ref: 17745 B) and will comprise the following native species mix:

- Hawthorn *Crataegus monogyna* – 30%
- Dogwood *Cornus sanguinea* – 20%
- Bird cherry *Prunus padus* – 10%
- Elder *Sambucus nigra* – 10%
- Hornbeam *Carpinus betulus* – 30%

The completion of these works will be signed off by the developer's ecologist along with the HCC Ecologist and/or Natural England.

2.6 F – Monitoring

The mitigation area will be monitored in the winter of 2021/22 by the developer's ecologist. This will comprise twice-monthly vantage point surveys during suitable conditions between October and March by a suitably experienced ornithologist. Each visit will commence two hours before high tide and continue for four hours.

2.7 G – Tree Removal

In Spring 2022, the developers ecologist will provide monitoring survey results to the HCC Ecologist and Natural England and the potential removal of the central tree line will be reviewed. If monitoring is inconclusive then a further review will be undertaken in Spring 2022 and an update to this strategy issued reflecting the change. Tree removal will only take place if it is concluded that the tree line is limiting the use of the northern section of the mitigation area (due to perceived overlooking of foraging geese).

2.8 H – Overseeding

If bare areas are identified in Spring 2022, overseeding using the same seed mix as 2.4 will take place to fill these areas. Overseeding will be preceded by a light harrow, or chain harrow, to prepare the seedbed without causing significant damage to the established grassland.

2.9 I – Install Footpath

Installation of the boundary footpath will take place in Summer 2022. This will be carried out in accordance with the approved plans and will include the installation of fencing to prevent access into the mitigation area (timber post and rail fencing with wire stock-proof fencing attached), and the excavation a ditch between the hedgerow and footpath. Planting of a mixed native species hedgerow on the mitigation area side of the fence will take place under Stage E such that the entire hedgerow is established by occupation. Note that footpath and fencing works must be completed by October 2021.

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Included within the fence will be a single access point for maintenance (located south of Plot 299). The access gate will have a sign affixed making it clear that there is no access for residents.

The completion of these works will be signed off by the developer's ecologist along with the HCC Ecologist and/or Natural England.

2.10 J – Remove Tree Line

If it is determined that the tree line should be removed (see 2.6), this will take place in September 2022. This is as late as possible to avoid the peak nesting bird season without running into the overwintering bird season. All removal will be supervised by the developer's ecologist to check for active bird nests and carry out fingertip searches for reptiles if necessary. All chippings will be removed from the site. Suitable logs will be retained to create reptile hibernacula and/or invertebrate habitat within the informal open space south of the site.

2.11 K – Disposal of Mitigation Area

Once the mitigation area is fully established and all works to the footpath, fencing etc. are complete, it will be offered to the management body. A final sign off visit will take place by the developers ecologist, HCC Ecologist, Natural England and management body. If all are satisfied the transfer will take place in accordance with the Section 106 Agreement. If any issues are identified, an amendment will be made to this strategy and issued to all parties setting out the corrective actions required.

2.12 L – Long-term Monitoring

The long-term mitigation area monitoring will commence in the winter of 2022/23 and comprise two stages.

Stage 1 will comprise annual winter bird surveys as per Section 2.6 and continue for 10 years until the winter of 2031/32. Twice-monthly vantage point surveys during suitable conditions between October and March by a suitably experienced ornithologist. Each visit will commence two hours before high tide and continue for four hours. Results will be reported to the Owner and LPA.

Stage 2 will comprise remote camera surveys every 5 years for a further 70 years. Two cameras will be deployed for a period of five days each month from October to March, one in the north east corner of the mitigation area and one in the south west. Cameras will be set to take photographs at 30 minute intervals. These will subsequently be checked by an ornithologist to confirm the presence or absence of brent geese. Results will be reported to the Owner and LPA. Should remote camera monitoring determine that birds are no longer using the mitigation area, corrective action will be undertaken and a further period of manual monitoring may be required to monitor its effectiveness. This will be agreed with the LPA.

2.13 M – Establish Steering Group

Once the mitigation area is handed over to the management body, a Steering Group will be established to oversee and advise on the long-term management of the mitigation area and inform any amendments to the plan. Members will include (but not be limited to):

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- Management body
- Local Planning Authority
- Developer's ecologist
- Solent Wader and Brent Goose Strategy Steering Group
- Resident's association.

2.14 N – Long-term Management

Cutting

The grassland will be cut twice per year. The first cut will take place in late July / early August to a height of 150 mm with arisings left to allow nutrients to re-enter the soil. The second will take place in late September to a height of 60mm with arisings removed to leave a short sward for foraging geese.

Hedgerow Management

Hedgerows will be cut annually in early October to maintain a height of 1.5 m and width of 1.0 m. Each year only one side or the top will be cut to maintain structure and fruit production for birds and mammals.

Hedgerow Replacement

Once established, hedgerows will be monitored for gaps with replanting undertaken as necessary to fill in any gaps identified during the planting season (November – February).

Scrape Management

Scrape banks will be strimmed to ground level every three years in late September / early October to prevent scrub or ruderal species from becoming established.

During this clearance period scrapes will also be inspected for silt build-up and to make sure they still hold water. If necessary, additional excavation will be undertaken to remove material. Additional lining material will be added if necessary to aid water retention.

Overseeding

Every 10 years, the grassland will be supplemented by additional overseeding using the same seed mix as 2.4. Overseeding will be preceded by a light harrow, or chain harrow, to prepare the seedbed without causing significant damage to the established grassland. This will refresh the seed bank and make sure that perennial rye grass and white clover remain the dominant species within the sward.

Furniture

Furniture, including fences, footpaths and interpretation boards will be inspected at minimum on an annual basis in early September, with repairs or corrective action completed prior to October.

Establishment Operations

Table 1 sets out the actions to be taken, timings and responsibilities for establishing the mitigation area.

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With reference to triggers within the Section 106 Agreement for the development, Actions A – D are pre-commencement requirements, Actions E – I are pre-occupation and J, K and M are prior to the occupation of 100 dwellings.

	Timescale	Operation	Undertaken By	Additional Supervision
A	September 20	Install acoustic barrier along western boundary of mitigation area. To remain in place until completion of development.	Developer's contractor	Sign-off by developer's ecologist, agreed by LPA / NE
B	September / October 21	Install goose decoy (x 6) within southern section of mitigation area.	Developer's contractor	Sign-off by developer's ecologist, agreed by LPA / NE
C	September / October 21 (1 week)	Create wader scrapes (x 3) within southern section of mitigation area using medium-sized excavator.	Developer's contractor	Guided by developer's ecologist.
D	September 20 (1 week)	Flail of arable areas of mitigation area to remove vegetation growth.	Developer's contractor	n/a
	September 20 (1 week)	Prepare arable areas using disc harrow (or similar) to maximum of 150 mm with chain harrow (if necessary) to remove arisings.		n/a
	September 20 (1 week)	Sow seed mix (perennial rye grass & white clover) using broadcast seeding at c.18 kg/ha.		n/a
	N/A	Fertiliser application is not considered necessary due to the inclusion of nitrate-fixing clover within the mix.		n/a
	September - October 20 (1 week)	Consolidate seed bed via rolling.		Sign-off by developer's ecologist, agreed by LPA / NE
	October 20	Cut grassland to 60 mm in height.		Sign-off by developer's ecologist, agreed by LPA / NE
E	October 20 – March 21	Install boundary hedgerow.	Developer's contractor	Sign-off by developer's ecologist, agreed by LPA / NE

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F	October 20 – March 21	Monitoring of mitigation area for use and establishment.	Developer's ecologist	In consultation with LPA / NE
G	March - April 21	Review whether removal of central tree line is necessary.	Developer's ecologist	In consultation with LPA / NE
H	April 21	Over-seed bare areas if necessary.	Developer's contractor	n/a
I	May – September 21	Install boundary footpath, fencing (post & rail with livestock fencing) and ditch.	Developer's contractor	Sign-off by developer's ecologist, agreed by LPA / NE
J	September 21	Remove tree line, if determined necessary in agreement with LPA / NE.	Developer's contractor	Supervised by developer's ecologist.
K	September 21	Dispose of mitigation area to future owner / manager – The Land Trust.	Developer / Management Body	n/a
L	October 21 – March 31	Stage 1 long-term monitoring.	Developer's ecologist	LPA
	October 31 – March 2101	Stage 2 long-term monitoring.	Management Body	LPA
M	October 21	Set up Steering Group	Management Body	LPA
N	Late July / early August 22 then Annually	Cut grassland to 150 mm in height.	Management Body	n/a
	September 22 then Annually	Cut grassland to 60 mm in height.		
	October 22 then Annually	Cut hedgerows – each year only one side or the top.		
	November 23 then Annually	Check for hedgerow gaps and replant as necessary.		
	Late September / early October 23 then	Strim scrape banks to ground level.		

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	Every 3 Years			
	April 31 then Every 10 Years	Over-seed grassland.		
	September 22 then Annually	Inspect furniture and carry out corrective action / repairs.		

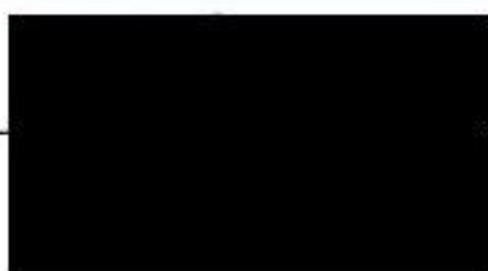
Quality Control

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FINAL

Prepared by:



Ben Cooke GradCIEEM

Project Ecologist

Checked and
Verified By:

David West CEnv MCIEEM

Associate Ecologist

Version:	Date:	Updated by:	Verified by:	Description of changes:
2	June 20	DW	DW	Amended to reflect Natural England comments.
3	August 20	DW	DW	Amended to reflect project timeline.

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Figure 1 Acoustic Fencing Plan



Tree Protection Fence			Tree Protection Fence			Tree Protection Fence			Tree Protection Fence			Tree Protection Fence			Tree Protection Fence			Tree Protection Fence			Existing Hedge Fencing			Security Fencing			Acoustic Fencing		
POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS	POINT	X-COORD	Y-COORD	POINT	EASTINGS	NORTHINGS	POINT	EASTINGS	NORTHINGS
1	468897.769	105837.515	31	469501.526	105972.262	61	469440.362	105853.266	91	468960.633	105543.709	121	468909.582	105767.662	151	469075.964	105540.539	181	468921.437	105738.756	1	469415.094	105941.493	1	468983.231	105855.114	1	468936.516	105929.372
2	468891.500	105834.281	32	468950.363	105976.577	62	469422.011	105845.320	92	468946.355	105563.248	122	468903.611	105766.082	152	469078.838	105530.915	182	468926.435	105755.835	2	469419.080	105948.854	2	469006.882	105861.079	2	4689370.133	105910.170
3	468891.500	105834.281	33	468950.363	105976.577	63	469422.011	105845.320	93	468946.355	105563.248	123	468903.611	105766.082	153	469078.838	105530.915	183	468926.435	105755.835	3	469417.632	105947.163	3	469006.882	105861.079	3	4689370.133	105910.170
4	468895.309	105843.264	34	469503.008	105984.972	64	469384.980	105930.197	94	468937.444	105602.241	124	468902.588	105760.534	154	469082.857	105551.243	184	468930.966	105768.156	4	469417.632	105947.163	4	469006.882	105861.079	4	4689370.133	105910.170
5	468895.477	105848.193	35	469508.001	105974.896	65	469386.062	105932.639	95	468934.009	105617.350	125	468987.426	105782.854	155	469058.570	105567.989	185	468930.941	105769.896	5	469417.632	105947.163	5	469006.882	105861.079	5	4689370.133	105910.170
6	468894.781	105852.999	36	469507.712	105976.232	66	469347.955	105851.136	96	468931.644	105616.693	126	469006.500	105755.821	156	469055.944	105577.769	186	468917.816	105866.601	6	469417.632	105947.163	6	469006.882	105861.079	6	4689370.133	105910.170
7	468897.911	105854.456	37	469510.851	105974.512	67	469328.816	105851.327	97	468929.680	105622.768	127	469012.549	105757.532	157	469029.107	105572.667	187	468915.052	105860.538	7	469418.290	105949.966	7	469006.882	105861.079	7	4689370.133	105910.170
8	468983.928	106082.743	38	469573.298	105969.045	68	469317.407	105851.160	98	468932.573	105623.581	128	469019.498	105758.980	158	469249.119	105815.656	188	468930.916	105867.832	8	469418.290	105949.966	8	469006.882	105861.079	8	4689370.133	105910.170
9	469215.551	105922.699	39	469586.656	105962.872	69	469321.635	105856.804	99	468930.506	105630.222	129	469024.517	105761.621	159	469254.417	105899.265	189	468930.929	105867.331	9	469415.094	105941.493	9	469006.882	105861.079	9	4689370.133	105910.170
10	469221.517	105915.335	40	469592.578	105940.749	70	469254.066	105868.456	100	468926.334	105629.045	130	469026.408	105760.107	160	469260.207	105879.092	190	468930.916	105867.104	10	469415.094	105941.493	10	469006.882	105861.079	10	4689370.133	105910.170
11	469232.513	105917.139	41	469590.172	105920.950	71	469246.790	105721.293	101	469205.621	105631.850	131	469019.498	105758.980	161	469260.207	105879.092	191	468930.916	105867.104	11	469415.094	105941.493	11	469006.882	105861.079	11	4689370.133	105910.170
12	469252.306	105919.319	42	469587.940	105901.076	72	469235.651	105866.554	102	469204.025	105631.522	132	469014.514	105725.803	162	469260.207	105879.092	192	468930.916	105867.104	12	469415.094	105941.493	12	469006.882	105861.079	12	4689370.133	105910.170
13	469271.571	105923.274	43	469584.756	105881.336	73	469217.891	105857.453	103	469206.540	105632.102	133	469019.498	105758.980	163	469260.207	105879.092	193	468930.916	105867.104	13	469415.094	105941.493	13	469006.882	105861.079	13	4689370.133	105910.170
14	469291.697	105926.510	44	469581.312	105861.635	74	469199.020	105849.363	104	469206.540	105632.102	134	469019.498	105758.980	164	469260.207	105879.092	194	468930.916	105867.104	14	469415.094	105941.493	14	469006.882	105861.079	14	4689370.133	105910.170
15	469311.186	105929.325	45	469577.323	105842.034	75	469181.309	105841.274	105	469206.540	105632.102	135	469019.498	105758.980	165	469260.207	105879.092	195	468930.916	105867.104	15	469415.094	105941.493	15	469006.882	105861.079	15	4689370.133	105910.170
16	469331.124	105933.075	46	469572.445	105822.652	76	469163.016	105833.169	106	469206.540	105632.102	136	469019.498	105758.980	166	469260.207	105879.092	196	468930.916	105867.104	16	469415.094	105941.493	16	469006.882	105861.079	16	4689370.133	105910.170
17	469348.078	105935.456	47	469567.039	105803.398	77	469144.538	105825.535	107	469206.540	105632.102	137	469019.498	105758.980	167	469260.207	105879.092	197	468930.916	105867.104	17	469415.094	105941.493	17	469006.882	105861.079	17	4689370.133	105910.170
18	469348.266	105941.053	48	469559.048	105784.765	78	469126.036	105817.794	108	469206.540	105632.102	138	469019.498	105758.980	168	469260.207	105879.092	198	468930.916	105867.104	18	469415.094	105941.493	18	469006.882	105861.079	18	4689370.133	105910.170
19	469350.718	105943.425	49	469550.521	105767.648	79	469107.748	105809.839	109	469206.540	105632.102	139	469019.498	105758.980	169	469260.207	105879.092	199	468930.916	105867.104	19	469415.094	105941.493	19	469006.882	105861.079	19	4689370.133	105910.170
20	469350.481	105927.001	50	469517.317	105735.820	80	469080.398	105501.884	110	468999.708	105746.139	140	469052.639	105616.567	170	469260.207	105879.092	200	468930.916	105867.104	20	469415.094	105941.493	20	469006.882	105861.079	20	4689370.133	105910.170
21	469357.853	105894.856	51	469518.517	105748.355	81	469070.912	105494.257	111	468996.954	105763.569	141	469058.111	105597.352	171	469260.207	105879.092	201	468930.916	105867.104	21	469415.094	105941.493	21	469006.882	105861.079	21	4689370.133	105910.170
22	469377.521	105846.684	52	469534.917	105733.051	82	469054.917	105486.859	112	468996.954	105763.569	142	469052.639	105597.352	172	469260.207	105879.092	202	468930.916	105867.104	22	469415.094	105941.493	22	469006.882	105861.079	22	4689370.133	105910.170
23	469386.342	105948.767	53	469552.346	105758.270	83	469033.711	105479.569	113	468997.337	105768.780	143	469046.288	105614.490	173	469260.207	105879.092	203	468930.916	105867.104	23	469415.094	105941.493	23	469006.882	105861.079	23	4689370.133	105910.170
24	469391.154	105944.425	54	469542.853	105768.054	84	469014.963	105472.602	114	468996.954	105768.780	144	469046.288	105614.490	174	469260.207	105879.092	204	468930.916	105867.104	24	469415.094	105941.493	24	469006.882	105861.079	24	4689370.133	105910.170
25	469411.408	105949.152	55	469533.246	105721.113	85	468996.954	105465.088	115	468993.845	105834.889	145	469033.736	105653.071	175	469260.207	105879.092	205	468930.916	105867.104	25	469415.094	105941.493	25	469006.882	105861.079	25	4689370.133	105910.170
26	469427.664	105952.474	56	469523.639	105733.571	86	468971.252	105454.857	116	468989.991	105837.021	146	469030.298	105627.317	176	469260.207	105879.092	206	468930.916	105867.104	26	469415.094	105941.493	26	469006.882	105861.079	26	4689370.133	105910.170
27	469434.880	105951.387	57	469512.351	105687.597	87	468967.587	105466.980	117	468996.954	105836.365	147	469024.770	105681.538	177	469260.207	105879.092	207	468930.916	105867.104	27	469415.094	105941.493	27	469006.882	105861.079	27	4689370.133	105910.170
28	469450.377	105956.076	58	469495.221	105677.561	88	468963.352	105486.434	118	469001.762	105805.376	148	469003.475	105684.986	178	469260.207	105879.092	208	468930.916	105867.104	28	469415.094	105941.493	28	469006.882	105861.079	28	4689370.133	105910.170
29	469460.504	105961.607	59	469476.859	105669.435	89	468955.907	105504.729	119	469001.442	105798.093	149	469006.579	105723.796	179	469260.207	105879.092	209	468930.916	105867.104	29	469415.094	105941.493	29	469006.882	105861.079	29	4689370.133	105910.170
30	469468.722	105967.412	60	469458.611	105661.851	90	468951.715	105524.106	120	469006.685	105778.792	150	469070.475	105556.764	180	469260.207	105879.092	210	468930.916	105867.104	30	469415.094	105941.493	30	469006.882	105861.079	30	4689370.133	105910.170

Temporary Fencing			POINT	EASTINGS	NORTHINGS
1	469361.604	105939.256	1	469361.604	105939.256
2	469364.516	105929.372	2	469364.516	105929.372
3	469341.988	105733.455	3	469341.988	105733.455
4	469421.605	105734.254	4	469421.605	105734.254
5	469437.221	105715.063	5	469437.221	105715.063
6	469432.837	105695.866	6	469432.837	105695.866
7	469438.454	105678.672	7	469438.454	105678.672
8	469444.725	105665.225	8	469444.725	105665.225

NOTES

KEY

- Acoustic Fencing
- Temporary Acoustic Fencing
- Tree Protection Fence
- Existing Hedge Fencing
- Proposed Security Fencing

NOTE

- All dimensions are in metres unless stated otherwise.
- Do not scale from this drawing. Only written dimensions are to be used.
- Site layout shown in this drawing is based on ID Partnership Proposed Site Layout Plan, drawing number PL 06 revision U, issued to RCP in .dwg format on 19/09/2019.
- Topographical Survey as per Silestone Site Survey, drawing number 36FA01, dated August 2016. Refer to the survey for survey station coordinates and levels.
- Tree Protection Fencing taken from Barrell Tree consultancy plans "16270-BT3" received 25.09.12.
- Temporary Acoustic Fence line and Permanent Acoustic Fence line interpolated from PDF received 02.12.19.

SCALE BAR 1:1000 at A1

Rev	Date	Details	By	Chk'd	App'd
A	11.12.19	Existing Hedge Protection added. Tree Protection fencing as per Barrell Tree consultancy plan 16270-BT3 only	PJ	LD	TRS

Client:

BARRATT HOMES

DAVID WILSON HOMES
WHERE QUALITY LIVES

Site:
Harbour Place,
Forty Acre Farm,
Bedhampton

Drawing Title:
**FENCE
SETTING OUT
LAYOUT**

Date: December 2019 **Scales:** 1:1000 off A1

Drawn: PJ **Checked:** AC **Approved:** TRS

Drawing No. BSO/E4519/620 A

WORK IN PROGRESS

RCP
ARCHITECTURE & CIVIL ENGINEERING

Rogers Cory Partnership
Architectural and Civil Consultants
The Old School, Old School Road
Hock - Hampshire - RG27 9N

T: 01256 769204 E: mail@rogerscorypartnership.co.uk W: rogerscorypartnership.co.uk



Figure 2 Landscape Layout

A. SETTING OUT

1. PLANTING SHALL BE SET OUT AS INDICATED ON THE DRAWING. ALL BEDS TO BE A MINIMUM OF 1 METRE WIDE AND MEASURED FROM EXISTING FINISH POINTS.
2. IF THE BED IS BUILT WITH CONCRETE THE CONTRACTOR SHALL INFORM THE SITE MANAGER OR LANDSCAPE ARCHITECT TO DETERMINE IF FOOTINGS ARE EXCESSIVE AND CAN BE REDUCED OR REMOVED.

B. GROUND PREPARATION

1. THE FOLLOWING WORKS SHOULD BE CARRIED OUT TO EXISTING TOPSOIL TO ENSURE IT CONFORMS TO BS 2825:1994. TOPSOIL SHOULD BE FREE FROM ROCKS LARGER THAN 50MM DIAMETER, CONCRETE, WIRE, BRICK, ALL ROOTS AND LESS THAN 20% CLAY.

C. PLANTING

1. ALL PLANTING TO BE WATERED IN WITH 20 LITRES PER SQUARE METRE. TREES SHALL BE WATERED IN WITH 20 LITRES PER TREE POSITION. TREES TO INCLUDE IRRIGATION PIPES.
2. TREES TO INCLUDE 1.5M CHRISTNUT STAKE 60MM ABOVE GROUND AND 100MM BELOW THE GROUND AND 1 NO. TREE TIE AND SPACER.
3. TURF TO BE PREMIUM GRADE CULTIVATED TURF.
4. ALL CUMBERS TO INCLUDE PRESSURE TREATED SOFTWOOD TRELLIS WORKS (150 X 150) FIXED TO EXISTING WALLS OR FENCES.

D. MULCH

FOLLOWING PLANTING SUPPLY & SPREAD 100MM OF ORNAMENTAL BARK MIXED CONIFER MULCH 30-50MM PARTICLE SIZE TO ALL PLANTED AREAS. FINISHED MULCH LEVELS SHALL BE NO HIGHER THAN 150MMES ON GRASS OR PAVEMENT LEVELS TO AVOID ANY SPILLAGE ONTO PAVEMENTS OR LAWNS.

GENERAL NOTES FOR THE DEVELOPER

ALL SOIL LEVELS FOR SHRUB BEDS AND GRASS AREAS SHOULD HAVE ANY COMPACTED SUB-GRADE THOROUGHLY BROKEN UP BY MACHINE BEFORE INSTRUCTING THE GROUND WORKER TO SPREAD TOPSOIL. ON THE LANDSCAPE CONTRACTOR TO COMMENCE WORK AS THE BEDS WILL BECOME WATERLOGGED IN WET WEATHER AND THE PLANTS AND TURF WILL DIE.

TOPSOIL

TOPSOIL, SPREAD FROM ON SITE SHOULD BE TO THE FOLLOWING DEPTHS: SHRUB BEDS - 100MM GRASS AREAS - 150MM TOPSOIL SHALL BE SPREAD FOR GRASS AREAS 1.5M WITH ANY AREA OF PAVING AND AFTER SETTLEMENT, THE SOIL LEVELS SHOULD BE NO GREATER THAN 100MM BELOW PAVED AREAS TO ALLOW FOR TURF.

C.D.M. REGULATIONS RISK ASSESSMENT

IT IS THE DEVELOPER'S RESPONSIBILITY TO DESIGN FOUNDATIONS TO ACCOMMODATE THE PROPOSED TREE AND SHRUB PLANTING. REFERENCE SHOULD BE MADE TO NHC STANDARDS VOLUME PARTS 4.2 AND 4.3 REGARDING TREES AND SHRUBS IN RELATION TO FOUNDATIONS.

ALL BARE ROOT PLANTS TO HAVE TARBUT GUARDS

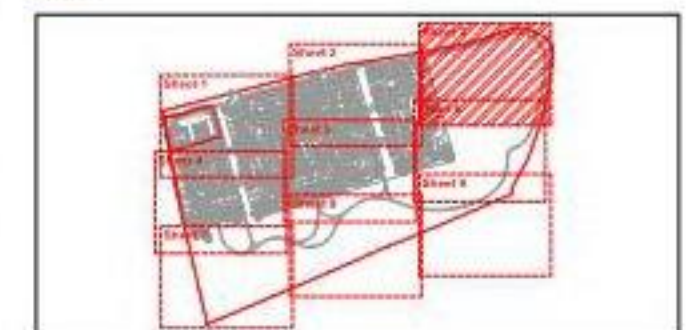
ALL TREES IN CLOSE PROXIMITY TO HARD SURFACES SERVICES AND FOOTPATHS ETC ARE TO HAVE GREEN LEAF BROODERS ROOT BARRIERS OR SIMILAR APPROVED.

BIRD AND BAT BOXES TO BE LOCATED IN MATURE EXISTING TREES AT LEAST 5M ABOVE GROUND OR AS DIRECTED BY AN ECOLOGIST. 50% TO BE APPROVED.

NORTH IS ASSUMED

Refer to RCP Colour Works Layout for boundary treatments.

Refer to RCP Site 78 Layout for shop fronts and signage detail.



Revision	By	Date
A	Submittal adjusted to new layout	PC 20.03.20
B	The key schedule	PC 25.02.20
C	Submittal adjusted to client comments	JW 15.04.20
D	Submittal adjusted to client comments	JW 14.04.20
E	Public drawing covering valid	JW 21.04.20
F	Submittal adjusted to client comments	AD 27.05.20
G	Afterward space & date added	JW 10.06.20

A. SETTING OUT

1. PLANTING SHALL BE SET OUT AS INDICATED ON THE DRAWING. ALL BEDS TO BE A MINIMUM OF 1 METRE WIDE AND MEASURED FROM EXISTING FLYING POINTS.
2. IF THE BED IS BUILT WITH CONCRETE THE CONTRACTOR SHALL INFORM THE SITE MANAGER OR LANDSCAPE ARCHITECT TO DETERMINE IF FOOTINGS ARE EXCESSIVE AND CAN BE REDUCED OR REMOVED.

B. GROUND PREPARATION

1. THE FOLLOWING WORKS SHOULD BE CARRIED OUT TO EXISTING TOPSOIL TO ENSURE IT CONFORMS TO BS 2825:1994. TOPSOIL SHOULD BE FREE FROM ROCKS LARGER THAN 50MM DIAMETER, CONCRETE, WIRE, BRICK, ALL ROOTS AND LESS THAN 20% CLAY.

C. PLANTING

1. ALL PLANTING TO BE WATERED IN WITH 20 LITRES PER SQUARE METRE. TREES SHALL BE WATERED IN WITH 20 LITRES PER TREE POSITION. TREES TO INCLUDE IRRIGATION PIPES.
2. TREES TO INCLUDE 1.5M CHESTNUT STAKE 60MM ABOVE GROUND AND 100MM BELOW THE GROUND AND 1 NO. TREE TIE AND SPACER.
3. TURF TO BE PREMIUM GRADE CULTIVATED TURF.
4. ALL CUMBERS TO INCLUDE PRESSURE TREATED SOFTWOOD TRELLIS BORDERS (15X15MM) FIXED TO EXISTING WALLS OR FENCES.

D. MULCH

1. FOLLOWING PLANTING SUPPLY & SPREAD 100MM OF ORNAMENTAL BARK MIXED CONIFER MULCH 35-50MM PARTICLE SIZE TO ALL PLANTED AREAS. FINISHED MULCH LEVELS SHALL BE NO HIGHER THAN 150MM ON GRASS OR PAVEMENT LEVELS TO AVOID ANY SPILLAGE ONTO PAVEMENTS OR LAWNS.

GENERAL NOTES FOR THE DEVELOPER

ALL SOIL LEVELS FOR SHRUB BEDS AND GRASS AREAS SHOULD HAVE ANY COMPACTED SUB-GRADE THOROUGHLY BROKEN UP BY MACHINE BEFORE INSTRUCTING THE GROUND WORKER TO SPREAD TOPSOIL. ON THE LANDSCAPE CONTRACTOR TO COMBINE WORK AS THE BEDS WILL BECOME WATERLOGGED IN WET WEATHER AND THE PLANTS AND TURF WILL DIE.

TOPSOIL

TOPSOIL SPREAD FROM ON SITE SHOULD BE TO THE FOLLOWING DEPTHS: SHRUB BEDS - 100MM GRASS AREAS - 150MM TOPSOIL SHALL BE SPREAD FOR GRASS AREAS FLUSH WITH ANY AREA OF PAVED AND AFTER SETTLEMENT. THE SOIL LEVELS SHOULD BE NO GREATER THAN 100MM BELOW PAVED AREAS TO ALLOW FOR TURF.

C.D.M. REGULATIONS RISK ASSESSMENT

IT IS THE DEVELOPER'S RESPONSIBILITY TO DESIGN FOUNDATIONS TO ACCOMMODATE THE PROPOSED TREE AND SHRUB PLANTING. REFERENCE SHOULD BE MADE TO NHC STANDARDS VOLUME PARTS 4.2 AND 4.3 REGARDING TREES AND SHRUBS IN RELATION TO FOUNDATIONS.

ALL SHAVE ROOT PLANTS TO HAVE TARBIT GUARDS

ALL TREES IN CLOSE PROXIMITY TO HARD SURFACES, SERVICES AND FOOTPATHS ETC ARE TO HAVE GREEN LEAF BROODING ROOT BARRIERS OR SIMILAR APPROVED.

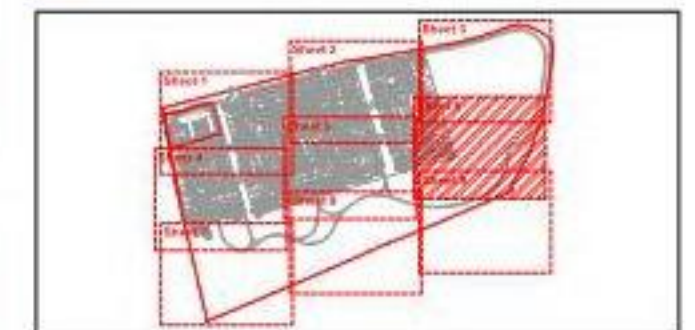
BIRD AND BAT BOXES TO BE LOCATED IN MATURE EXISTING TREES AT LEAST 5M ABOVE GROUND OR AS DIRECTED BY AN ECOLOGIST. SVL TO BE APPROVED.

NORTH IS ASSUMED

Refer to RCP Column Works Layout for boundary treatments.

Refer to RCP Site 10 Layout for drop kerbs and drainage detail.

Existing tree/shrubs to be retained	Grass within 10m of G.D.P.
Existing tree/shrubs to be retained	Wetland grass path
Proposed trees	Proposed lawns
Proposed trees with root barrier	Decorative gravel
Specimen shrubs	3m Broad Green pathway, ruled in every 100mm granular sub-base, with a layer of 10mm, edged with timber
Ornamental shrubs with bark mulch	Grass/water
Hedge	Acoustic fencing
Climbers	1.2m high stock proof fencing with mesh
Premium grade turf	Composts location
Amenity grass	Vehicle maintenance gate
Willowen DM1 Drain general purpose meadow mix	Ditch (0.5m deep)
DM1 Meadow grass mix for wetlands	



Revision	Description	Date
1	Submittal adjusted to new layout	20.03.20
2	The final layout	20.03.20
3	Submittal adjusted to client comments	21.04.20
4	Submittal adjusted to client comments	21.04.20
5	Submittal adjusted to client comments	21.04.20
6	Submittal adjusted to client comments	21.04.20
7	Submittal adjusted to client comments	21.04.20