CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Lovedean Lane, Waterlooville

DATE:-	8th February 2021	REV:-	2

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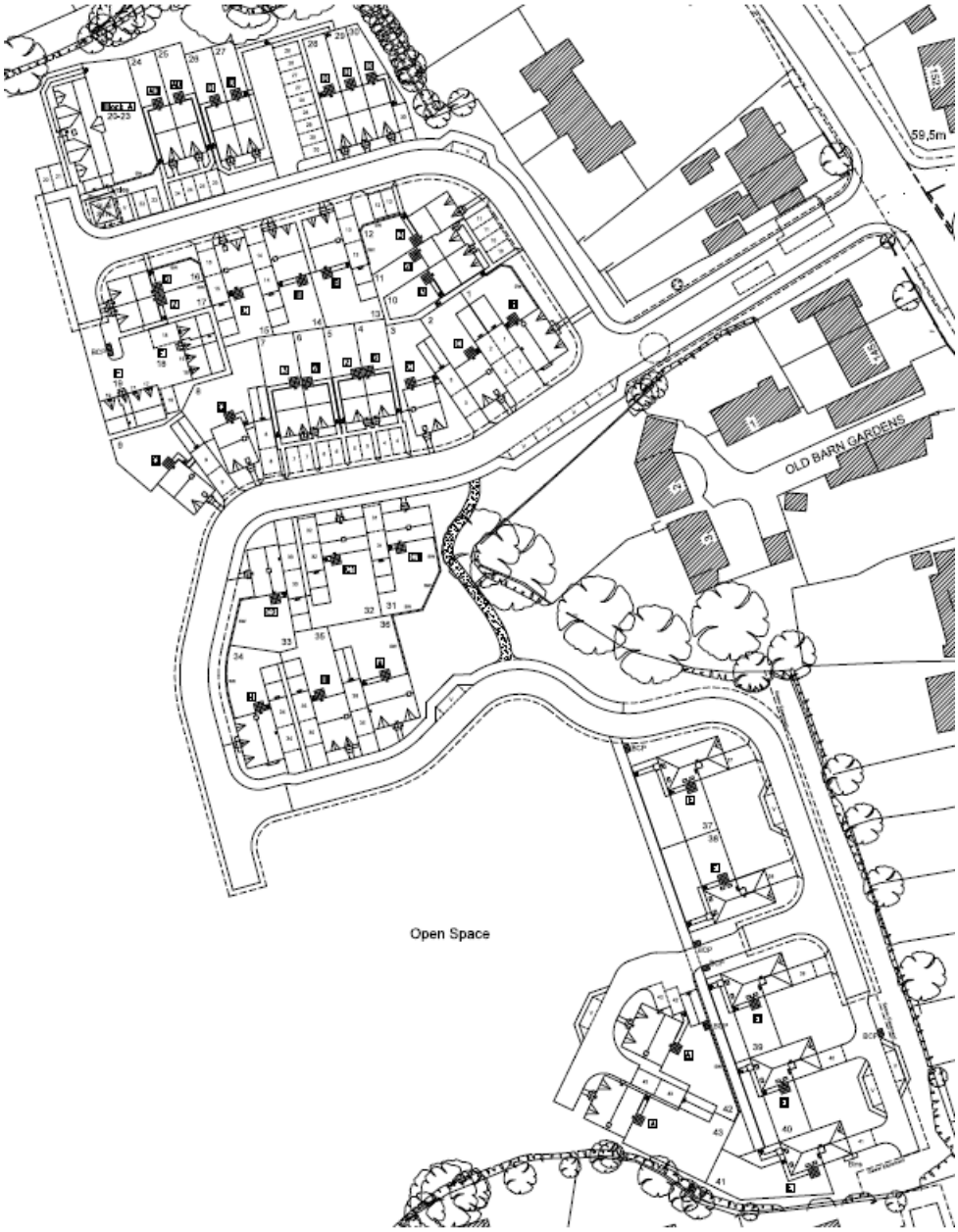
1. Purpose of the document

This plan has been developed in response to the appropriate planning conditions to give guidance on the control measures in place to mitigate concerns raised within the conditions

2. Project details

a. Work activity

Construction of a new housing estate and associated infrastructure. Consisting of 43 dwellings, private gardens, public open space, access roads and all associated infrastructure.

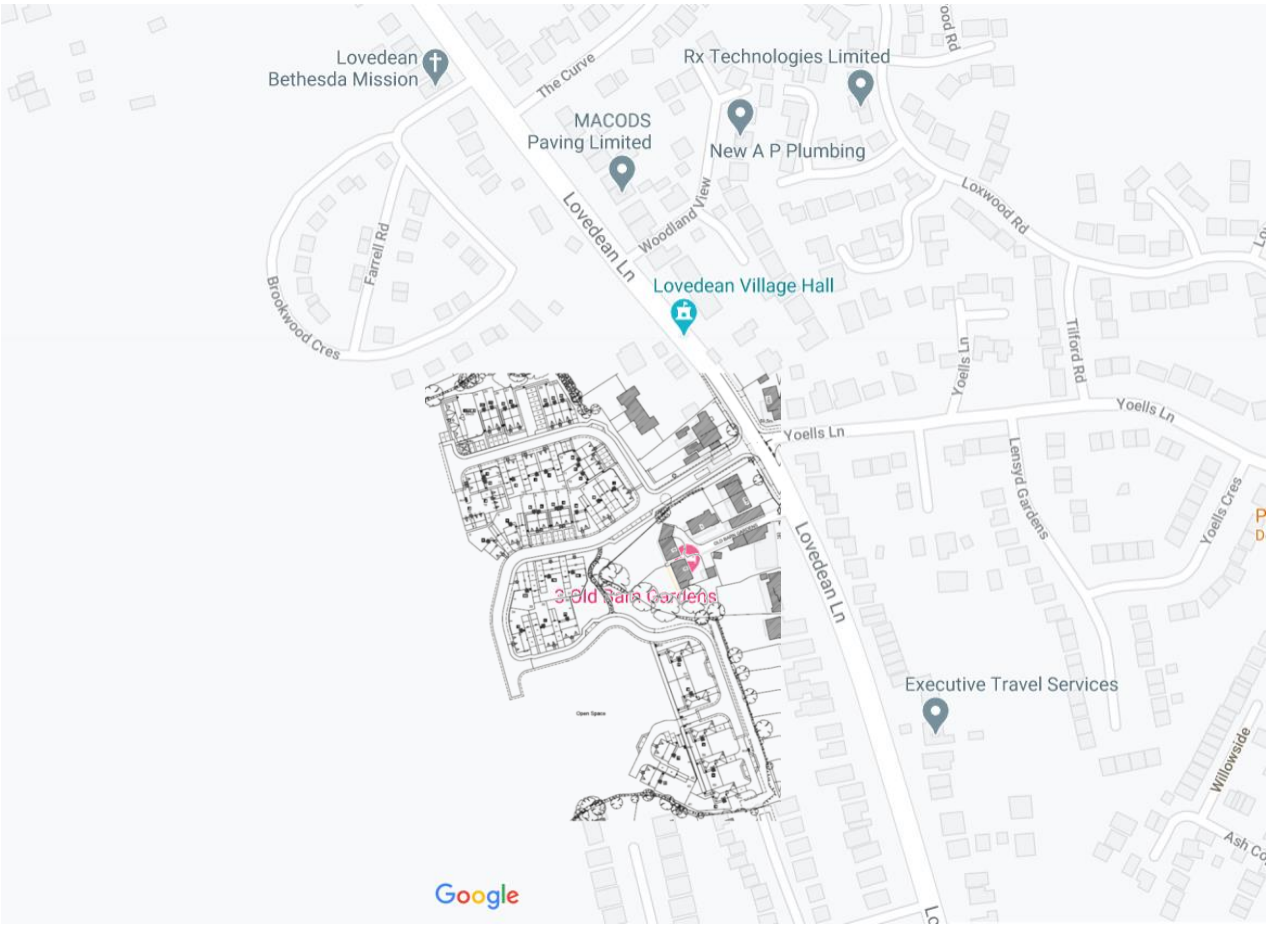


BARGATE HOMES

b. Site location

Site address	Lovedean Lane, Waterlooville, PO8 9SF			
National Grid References	Grid reference		SU 68664 12661	
	Grid Reference (6 figure)		SU686126	
	X (Easting)	468664 ,	Y (Northing)	112661
	Latitude :	50.909346 ,	Longitude :	-1.0247530
Site Area	2.61 Ha			

Site location:-



c. Site description

Occupancy use	Site is currently undeveloped agricultural / pasture land, sat over areas of soluble substrates which will require prescribed construction methodology.
Existing structures	In order to facilitate the development, 149 Lovedean lane will need to be demolished

access	The proposed site access will be via the existing access which is currently being used for agricultural vehicles. This access will be widened to form an estate road access by demolishing 149 Lovedean road.
trees	Mature trees exist on the N, S and Central eastern fringes of the site. ***TPO's*** Trees to the southern boundary adjacent to James Copse Road and to the eastern boundary (next to the driveway) are TPO'd.
asbestos	No clear evidence during initial walk over was noted in the GEO environmental Executive summary.
Hazardous materials	No evidence of contamination was noted in the GEO environmental Executive summary

d. Schedule of accommodation

Schedule of Accommodation.
Private

Type	Bedrooms	No.
A	4 Bed House	3
B	4 Bed House	3
C	3 Bed House	5
C1	3 Bed House	2
C2	3 Bed House	1
D	2 Bed House	5
E	3 Bed House	5
H	4 Bed House	2
		26

Affordable

Type	Bedrooms	No.
Block A	1 Bed Flat	4
F	2 Bed FOG	2
AD	2 Bed House	2
2	2 Bed House	6
3	3 Bed House	3
		17
TOTAL		43

e. Duration of project

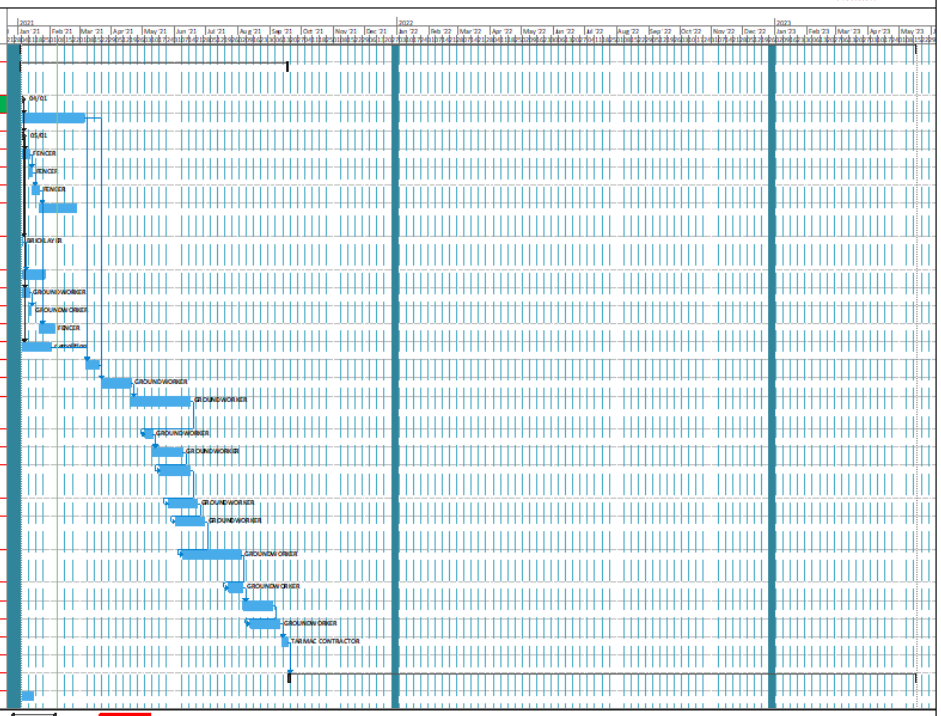
The project is anticipated to last 118 weeks in line with the development program below

Bargate Homes

Mon 08/02/21

LOVEDEAN

ID	Task Name	Duration	Start	Finish
1	**overall development**	**117.8 wks**	**Mon 04/01/21**	**Wed 17/05/23**
2	**pre development enabling works**	**38.4 wks**	**Mon 04/01/21**	**Fri 17/09/21**
3	PUSHBUTTON	0 days	Mon 04/01/21	Mon 04/01/21
4	LEAD TIME FOR TENDER	45 days	Mon 04/01/21	Fri 05/03/21
5	START ON SITE DATE	0 days	Tue 05/01/21	Tue 05/01/21
6	erect reptile fencing	5 days	Tue 05/01/21	Mon 11/01/21
7	erect tree protection	5 days	Tue 12/01/21	Thu 14/01/21
8	erect site perimeter fence	5 days	Fri 15/01/21	Thu 21/01/21
9	form temporary access for farm track	5 wks	Fri 22/01/21	Thu 25/02/21
10	construct temporary site supply cabinet.	2 days	Mon 04/01/21	Tue 05/01/21
11	SITE TEMPS CONNECTION	15 days	Wed 06/01/21	Tue 26/01/21
12	strip and grade compound	5 days	Tue 05/01/21	Mon 11/01/21
13	form site bases	2 days	Tue 12/01/21	Wed 13/01/21
14	erect compound hoarding	10 days	Fri 22/01/21	Thu 04/02/21
15	demolition of bungalow	20 days	Tue 05/01/21	Mon 01/02/21
16	off site drainage connect	10 days	Mon 08/03/21	Fri 19/03/21
17	undertake 278 works	20 days	Mon 22/03/21	Mon 19/04/21
18	construct drainage infrastructure to completion	40 days	Tue 20/04/21	Tue 15/06/21
19	form SUDS tank	5 days	Tue 04/05/21	Mon 10/05/21
20	cut road and cap	20 days	Tue 11/05/21	Tue 08/06/21
21	install kerb nces to form line and level	20 days	Tue 18/05/21	Tue 15/06/21
22	install all on site main dr	20 days	Wed 26/05/21	Tue 22/06/21
23	excavate all mains service trenches	20 days	Wed 02/06/21	Tue 29/06/21
24	install services tel and chlorinat ewtr	40 days	Wed 09/06/21	Tue 03/08/21
25	install road crossing duct	10 days	Fri 23/07/21	Thu 05/08/21
26	install all kerb lines	20 days	Fri 06/08/21	Fri 03/09/21
27	grade up road	20 days	Fri 13/08/21	Fri 10/09/21
28	tarmac to base and binder	5 days	Mon 13/09/21	Fri 17/09/21
29				
30	**PLOT BUILD**	**81.4 wks**	**Mon 20/09/21**	**Wed 17/05/23**
77	clean up	10 days	Mon 04/01/21	Fri 15/01/21



1 1.0% 1.0% Task Milestone Summary constraint

START DATE TO REFLECT BLOCK START DATE ON MAIN PROGRAM

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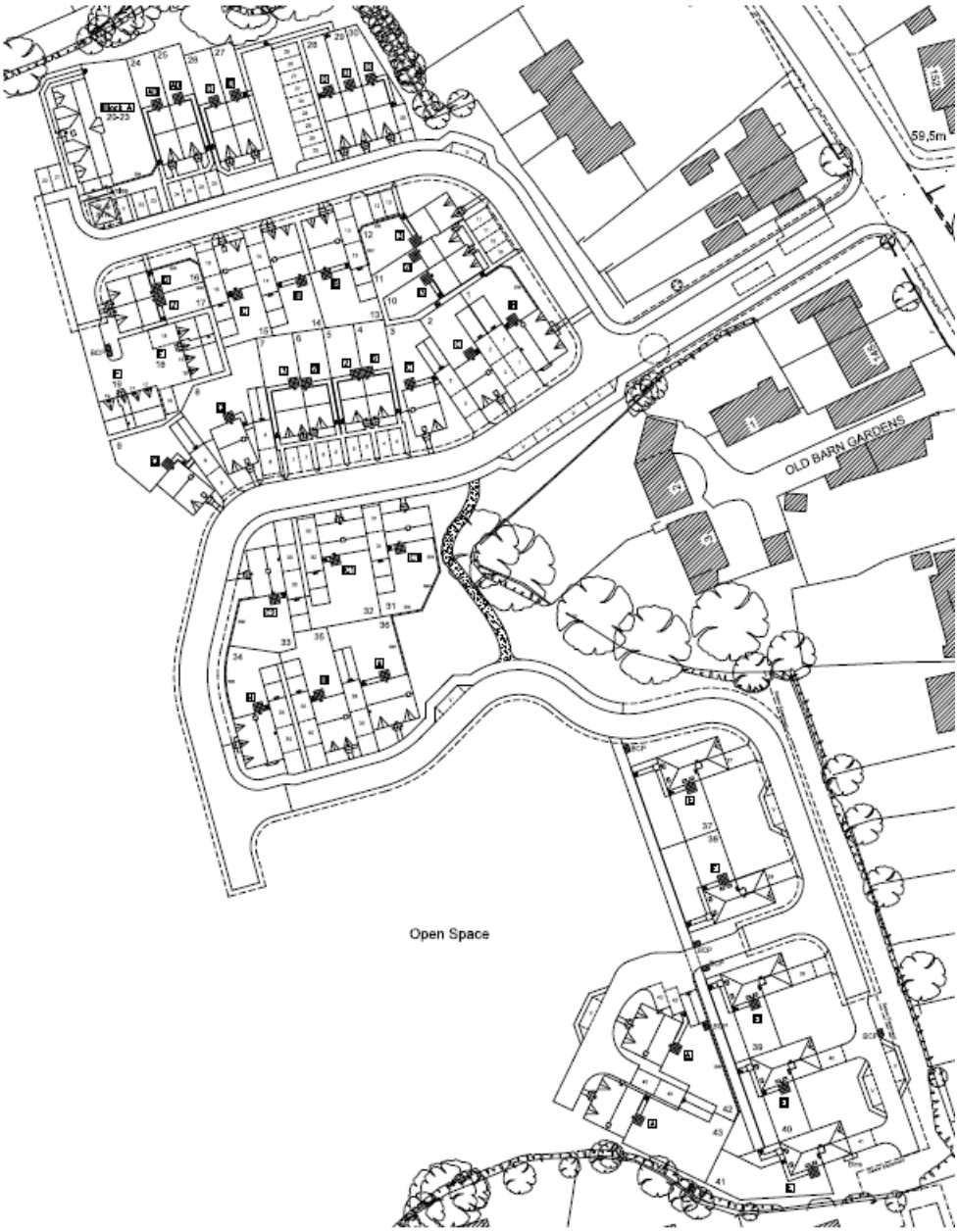
f. Site Layout



g. Consultants team sheet

Construction Director	Andy Kirkpatrick Bargate Homes 02380 602255
Architect	
Engineer (Structural)	
Engineer (Civils)	
Ecologist	
Arboriculturalist	

3. Site set up / pre-construction

The site will be set up in accordance with the management plan. On this plan details of the following will be adhered to:

- Tree protection
- Habitat clearance zones
- Reptile fence
- compound position
- sales area
- on site car park
- site accommodation position
- tree removals
- temporary Haul roads
- site fencing / boundary
- limited construction routes

a. Tree protection

All tree protection will be installed as per the details approved through the planning process (as below) and agreed with the tree officer on site. Tree protection will be monitored and maintained throughout the life of the development

b. Habitat clearance

Habitat clearance will be undertaken in accordance with the submitted mitigation strategy

c. Site boundary

The boundary of the construction activities will be established and maintained throughout the life of the development and in accordance with the attached management plan. Boundaries will be monitored regularly by the site manager.

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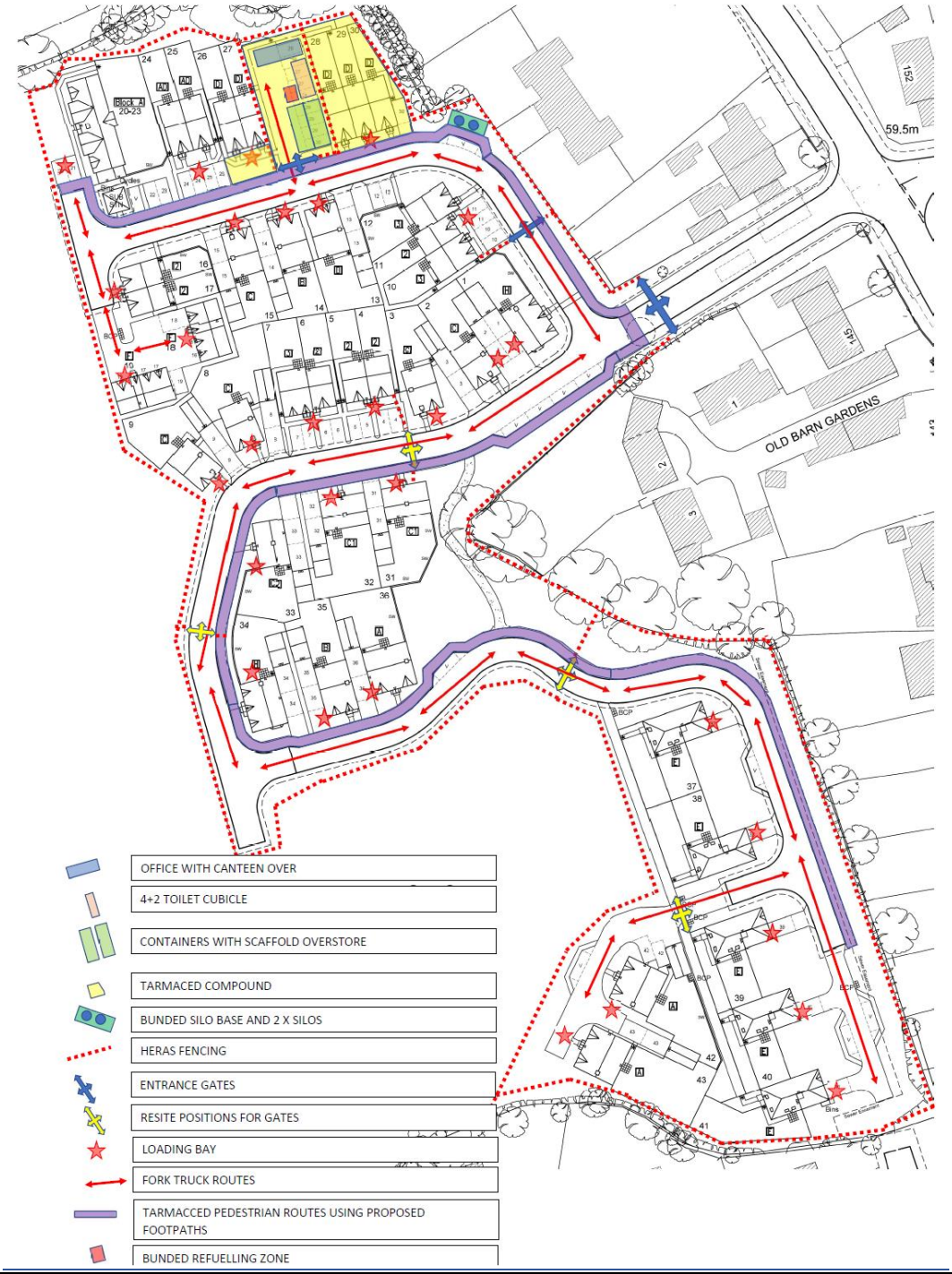
d. Site compound

the site compound will be located on an area of permanent carpark. This carpark will be formed entirely to site all temporary accommodation which will remain for the life of the job. The compound will occupy plot positions 28,29 and 30 and will be tarmacked and drained until such time as the plots need to be excavated.



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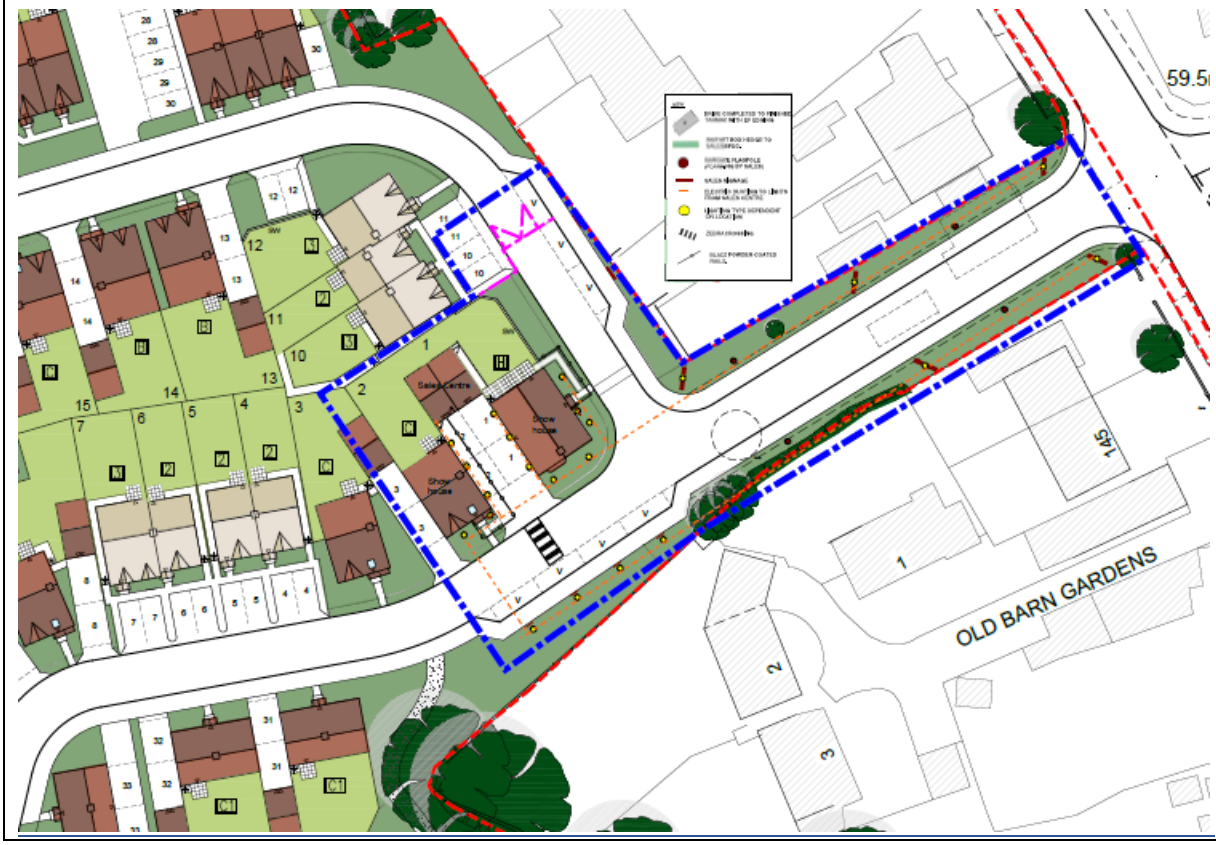
e. Sales area:



4. Construction Phase

a. Operation times

THE SITE WILL BE OPERATIONAL AT THE FOLLOWING TIMES:-

MONDAY TO FRIDAY	8 am to 6pm
SATURDAY	8 am to 2pm

No operations will commence outside of these hours.

Deliveries will be restricted between the hours of 8am and 5pm Mon-Fri and 9am and 2pm Saturday

b. Construction team

The site will be managed from start to finish by an appointed management team consisting of the following:-

Construction director	Andy Kirkpatrick 07766 470761

Contracts Manager	TBC
Site Manager	TBC
Site assistant	TBC
Gate Man/ banksman	TBC

The site manager will be the responsible person on site. He will monitor all site boundaries on a daily basis and rectify any breaches to ensure a secure boundary. He will monitor all adjacent roads on a daily basis and will ensure where practicable that material deliveries are spread out to avoid congestion.

The site will be generally be constructed in the sequence identified on the program but may be subject to change depending on sales. Occupation of the sold properties will therefore follow a similar logic sequence.

Responsibilities:-

Site manager

The site manager will be responsible for the day to day management of Health and safety, environmental and quality performance during the construction of the proposed development. The site manager will also be responsible for implementing the CEMP, monitoring the performance of subcontractors and maintaining records.

In addition, the site manager will be responsible for ensuring that all staff and operatives receive a site specific health, safety and environmental induction prior to starting work on-site and are provided with relevant information concerning environmental sensitivities and protection measures.

The site manager will be responsible for reviewing all risk assessments and method statements and ensuring an appropriate programme of tool box talks are implemented.
The site manager will also be responsible for maintaining a traffic management plan and ensuring walk ways and plant routes are correctly maintained

Contracts Manager

The contract manager will support and reinforce the site manager in his duties. They will monitor the site during their visits and follow up on any observations with the offending parties

Construction Director

The construction director will be responsible for dealing with all queries and complaints from the general public, local community and new occupations. He will investigate the complaints, respond and maintain a register

All staff and subcontractors

All staff and sub-contractors will be responsible to work to agreed plans, methods and procedures to eliminate and minimise environmental impacts.

Understand the importance of avoiding pollution on site, including noise and dust, and how to respond in the event of an incident to avoid or limit environmental impact

Report all incidents immediately to their line manager

Monitor the work place for potential environmental risks and alert the immediate line manager if any are observed

Co-operate as required with site inspections and audits

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c. Surface water run off

- The Groundworker is to be the sole contractor on site for the period April – September. This takes advantage of more favourable weather conditions and enables a swift managed earthworks phase and early installation of main infrastructure roads and mains drainage.
- Works will be programmed during a weekly meeting and a laminated plan produced which will be displayed within the site office indicating works scheduled for the working week factoring in weather predictions.
- First activity is the construction of the site access road and associated drainage in order to provide a discharge point for water during construction activities.
- Works will then progressed in a phased approach of cutting, filling and covering in.
- There will be a phased installation of the raft foundations (no more than 4 being constructed at one time) i.e. cut or fill the area to required formation, cast slabs, bund with wraparound of brickwork and discharge any collected water off the slab (via silt trap) into mains drainage.
- Contractor parking and material storage areas are to be installed in accordance with the Construction site plan – all bunded and positively drained.

Special considerations (surface water management)

To ensure that no focused discharge of water is allowed into the ground the following special considerations should be made:

Cut and fill (water management)

- The site investigations have revealed that most of the cut material, topsoil and clay are unsuitable by its nature for use as fill under roads and buildings; however it can be used under landscaped areas.
- The cut and fill exercise has identified an area which due to its nature should only be cut during the months of April-September.
- Before commencing any cut operation the weather forecast shall be checked to ensure a dry forecast that will ensure the material excavated can be cut and covered, by suitable capping material, on the same day. This will protect the cut surface from direct exposure to rainfall.
- The site will ensure sufficient capping material is available and ensure all cut areas are capped and compacted on the same day the cut operation occurs.
- The areas of fill can be undertaken at any time as the fill material will require importing onto the site.
- Stockpiling of material will be subject to weather forecast. Run off from the sides of the stockpiles could create focused discharges into the ground and therefore should be avoided.
- Any contamination encountered during works on site will be reported to the site manager and the Geotechnical Engineer contacted for action required.
- Ground conditions should be carefully monitored by Foreman and Site Manager. Any soft or unusual ground conditions should be brought to the attention of the Geotechnical and Civil Engineer for clarity and work cease in this area until resolved. The excavation should be covered until Engineers attend site.
- Drainage trenches where soft ground encountered should be reviewed by the Geotechnical and civil Engineer before pipes are installed.

Temporary water management

- The first section of road into the site will be constructed at an early stage along with the point of connection to the public sewer to allow for water to be discharged.
- Work will be carried out in short sections and temporary measures will be put in place to ensure surface water during the construction phase is managed to prevent any concentrated discharge to the ground.
- Temporary lined swales will be constructed adjacent any stockpiled materials (if unavoidable) and the surface water conveyed to a temporary lined pond area to allow silt to settle before discharging in a controlled manner (limited discharge) to the public sewer.
- Any temporary swales and settlement ponds will be lined with impermeable membranes and be partially filled with gravel/voided crushed stone material to provide filtration prior to discharge into the main drainage.
- Additional filtration will be via straw bales wrapped in a geotextile membrane
- These will be inspected weekly or more often in periods of inclement weather. The responsibility for checking the effectiveness of the system rests with Construction Director.

Construction processes (water management)

- Buildings are constructed upon rafts to mitigate any issue with disturbing the ground water protection zone.
- To prevent the potential focus points of water discharge from the slabs, these will be bunded by way of a sacrificial wraparound of bricks; a positive drainage point will be provided to convey water to either a temporary swale or permanent drainage system.
- Down pipes on properties will be connected to the main drainage on installation to avoid water accumulation.
- Outside taps to properties will have back inlet gullies connected to mains drainage installed prior to connection.
- Watering of landscaping will be carefully managed to ensure sprinklers are not left on for an excessive time.
- Mortar Silo areas will be bunded and water discharged through the managed system.
- Office compound and parking areas will be completed to an impermeable finish and positively drained.
- The Diesel tank will be of a proprietary double bunded modern type stored within a purpose build, lined bund covered over to prevent diesel spills and rainfall accumulation. This bund will have a capacity of 110% of the tank.
- Temporary water supplies to compound should be installed and tested to ensure there are no leaks.
- These supplies will be visually inspected daily to ensure there are no leaks.
- A tool cleaning area should be provided within the compound and positively drained.
- Use of hose pipes should be restricted and managed.
- During the groundworks phase, wheel washing should take place in a designated area which is positively drained via a silt trap.
- Concrete deliveries should be managed so that excess material is placed into lined skips and washing out into this skip occurs.
- Tool box talks will be held will site operatives to make clear to all on site that there is a significant risk to groundwater and that there should be no discharge to ground of:
  Any potentially polluting substance,
  Turbid (cloudy) water,
  or water that will create surface water runoff.

Permanent drainage inspection practices

- The completed drainage will be inspected in line with the "Testing and Inspection" requirements under Part H (Drainage and waste disposal) of the Building Regulations to ensure there are no leaks within the system.
- In addition, all drainage will be jetted and CCTV camera report produced to confirm integrity of the network.

Dealing with Spillages

- Use bunded areas for refuelling as indicated on the attached Compound plan.
- Operators will be trained in refuelling procedures and tool box talks held regularly.
- Drip trays will be used when refuelling and care should be taken with hoses running between mobile plant and tank to avoid spillages and contain any leakage.
- Spill kits will be provided adjacent to refilling sites
- Operators will be spill kit trained and kits will be inspected at regular intervals by the Site Manager to ensure supplies are maintained.
- The Site Manager will inspect bunds and drip trays daily, more frequently during periods of bad weather.
- Rainwater should be kept from entering bunds and drip trays. The site Manager will be responsible for overseeing the emptying of drip trays bunds adhering to control procedures.
- Refuelling procedures will be covered in the site induction, though only trained operatives will be permitted to carry out the procedure.
- Small plant should be refilled within the designated area.
- Information will be displayed on spill kits and within the site office covering emergency actions and contact details. The EA and Portsmouth Water contacts will be prominently displayed and used should any incident occur which could impact upon groundwater.
- The Site Manager will inspect daily the site area for spillages, an incident form will be completed should any be found and forwarded to HQ so we can avoid reoccurrences.
- Small/mobile/static plant such as generators, compressors, pumps etc will have drip trays.
- Clean spillages using agreed wet handling methods.
- Hazardous chemicals, which may harm staff and the environment, should be stored in an appropriate container within a ventilated store.
- COSHH assessments covering all substances on site will be kept within the site office and operatives appropriately trained in emergency procedures.
- The Site Manager will be responsible for updating the register.
- Plant should be regularly maintained and removed if found to be leaking.

d. On and off site traffic

During the construction phase, Speed limit signage and access signage will be positioned to minimise the potential for any adverse disruption.

During the build phase, the site will employ a gate man who will sign operatives and deliveries in and out of site. Off-site roads will be monitored continually by the site manager and road sweeping measures will be implemented as required to ensure the surrounding areas are kept clean. Daytime temperatures will be monitored to ensure that any wet swept roads are gritted if sub-zero temperatures are anticipated.

During the groundworks phase, a wheel washing station will be established to ensure minimal impact of the surrounding area. This will consist of an operative with a pressure lance monitoring exiting vehicles

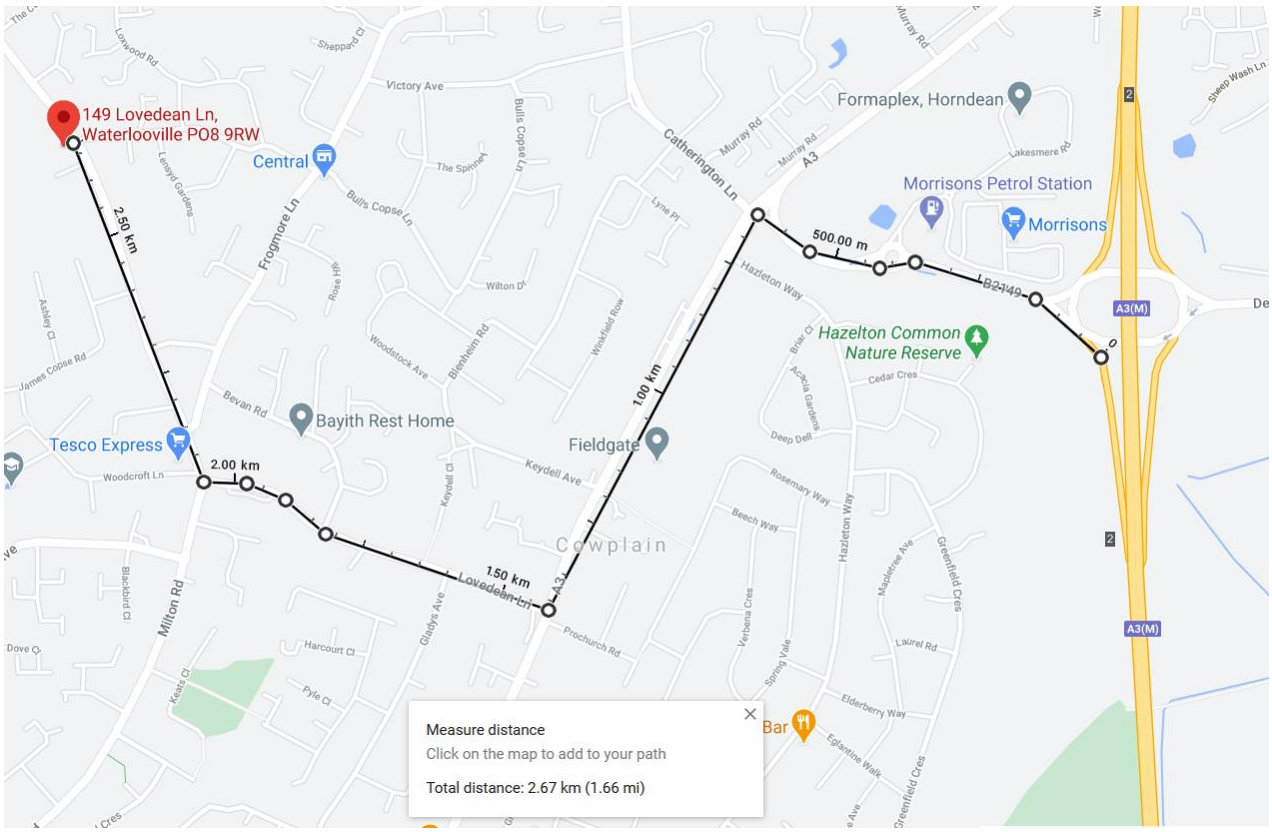
Parking will be available in the licenced compound for the duration of the project

e. Delivery route to the compound and distribution

Materials will be loaded and unloaded In the material compound as shown on the compound plan, on site distribution of materials and labour will be in accordance with this plan following designated truck and pedestrian routes.

f. Off site traffic routes

Off-site traffic will be directed as below from the A3(m)



g. General Traffic Management

On site traffic will be restricted to delivering and offloading in the material compound which will be adjacent to the site compound. There after distribution of materials will follow the traffic management plan.

The material compound will be stoned up and tarmacked.

- Site traffic will be restricted to 5mph for all delivery vehicles
- A full time operative will be employed to manage all material deliveries to site he will:-
- Monitor speed
- Monitor wagons for any adverse environmental impact
- Check wagons before leaving site to ensure wheels are clean
- Check wagon sides to ensure there is no loose debris.
- Inform the site manager of any breaches that require immediate rectification

h. Waste

Prior to the site commencing we will identify the waste streams that the site is likely to develop to determine a strategy for dealing with the waste

A designated waste handling area will be established within the site material compound where pre-identified waste streams will be segregated.

All waste leaving Bargates sites will be handled by one of our dedicated waste handling partners and sent to a recycling facility. At the facility the waste is broken down into its component parts and re-cycled.

We receive live reports from the re-cycling partners highlighting the percentage of waste diverted from landfill and the percentage of each of the recovered components. Copies of the waste results will be displayed in the site office.

There will be NO burning permitted on the site

i. Noise

It is inevitable that construction sites will make noise but the site is limited to low level housing operations, plant and equipment will be commensurate with this type of work. Small tools will be used akin to those identified on the "site Noise Safety" chart. In addition to this main plant such as telescopic handlers, excavators, dumpers, tarmac laying plant will all be utilised throughout the construction phase.

Foundations on the site will be standard excavated footings; It is not envisaged that that we will need to pile on this site. However, if we should need to pile it will be augured piling which produces low vibrations and minimal noise levels'

The workforce

Bargate Ltd and its contractors will ensure that, where reasonably practicable, nobody on site is exposed to noise in excess of 80db (A). Where noise levels are suspected to be at or above 80db(A) the direct employer will be responsible for ensuring a suitable noise assessment is carried out. Suitable hearing protection must be made available to all affected personnel on request. Contractors undertaking work that continuously exceeds the noise level of 80db(A) hearing protection zones must be set up with clear warning signs positioned

Completed work place noise assessments or contractors equivalent will be filed in the H&S file on site.

On completion of the noise assessment Bargate Ltd and its contractors will provide relevant information, instruction and training to employees at risk from excessive noise levels.

Except where expressly permitted and agreed with the local authority, no operations which are audible above this range will be carried out outside of the working hours.

The surrounding area

There is no major demolition or breaking of structures which would involve heavy crushing plant so operations are limited to low level construction operations where any elevated noise levels will be of short duration. Demolition of the existing bungalow is a relatively minor operation and the materials will be removed for off-site processing.

There are no properties adjacent to the site where construction activities are likely to cause problems however the following mitigation measures will be maintained at all times:-

1. No work will be undertaken outside of the operational hours without the prior agreement of the local planning authority
2. There will be no radios permitted on site, this will form part of the site induction.
3. These measures relating to the protection of the home owners will be in place prior to occupation of the respective property
4. In case of any formal complaints these should be addressed to the construction director Andy Kirkpatrick

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Site Noise Safety

	Orbital Sander	85 Db	or		Generator	73 Db	N/A
	Paslode Nailer	101 Db	or		5x3 ½ Mixer	85 Db*	or
	Petrol Cut-off Saw	106 Db*	or		Jigsaw	101 Db	or
	Planer	105 Db*	or		Petrol Mixer	92 Db	or
	Radial Arm Saw	106 Db*	or		Angle Grinder	102 Db*	or
	Router	85 Db	or		Cartridge Tool	116 Db*	and
	SDS Drill	101 Db	or		Demolition Hammer	106 Db*	or
	Wacker Plate	96 Db	or		Poker Vibrator	88 Db*	or
	Circular Saw	100 Db	or		Magic Screed	99 Db	or
	Concrete Planer	103 Db	or		Power Float	119 Db	and

NOTE:

PPE is always a last resort, should it fail, you will be injured.

If you are wearing hearing protection, then Ear muffs should be worn in preference to ear plugs.

Please be aware of noise level when working in close proximity to Machinery.

A 3 decibel increase equates to the noise level doubling.

For Machinery not listed above please contact the Site Manager.

*Indicates measured levels, all other Db ratings are from manufacturers guidelines.

j. Dust

The workforce

Dust and respiratory protection will form part of the site induction and all employees exposed to any dust will be fitted with face fit dust masks

The surrounding areas

Mitigation measures will be implemented throughout the life of the construction project as follows:-

- All petrol operated cutting will be fitted with dust suppression to minimise the potential for airborne particles.

- During the build phase, the estate roads will be monitored on a daily basis by the site manager and swept as required using water dampened sweeping equipment to remove dust residue rather than supress it.
- The site manager will continually monitor for any increased levels of dust and water bowsers will be on site with spray valves to allow any emergency suppression.
- The Site Manager will review daily.

k. Lighting

The external lighting will be street lights only, the only lights will be those on vehicles. External Site works cannot commence in the winter hours beyond sunlight hours to accord with Bargate Homes Health and Safety policy.

Should there be unavoidable need for outside of daylight working hours any lighting will be directed away from highways and neighbouring properties.

The compound has been positioned in an extremely screened position and compound lighting is not considered to be an issue

l. Communication / complaints

The construction director will be responsible for dealing with all queries and complaints from the general public, local community and new occupations. He will investigate the complaints, respond and maintain a register.

Complaints can be raised directly with the site manager who will record the details and Inform the Construction Director of any specifics; including complaints dealt with at site level that require no further action.

5. **Site completion.**

A period of 40 days has been included in the programme to decamp the site and complete the final surfacing / kerb replacements etc.

It is understood that at this stage much of the site will be occupied.

Formal written communication will be issued to all occupied houses keeping them informed of any potential disruption during this final phase of the development.