



DRAINAGE MAINTENANCE AND MANAGEMENT PLAN

Whitby Seafoods New Ambient Store Fairfield Way Whitby

Reference	4613-1-JPG-XX-XX-RP-D-0620-S2-P01
Date	August 2019
Author	MDP

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CONTENTS

1.0	Introduction	1
2.0	Sewers	1
3.0	Flow Control Chamber	2
4.0	Drainage Channels	2
5.0	Road Gullies	3
6.0	Detention Basins	3
7.0	Manholes/Access Chambers	4
8.0	Oil Separators	4
9.0	Health and Safety	5
10.0	Record History	5



1.0 INTRODUCTION

The surface water drainage system proposed as part of the works is shown on JPG drawing 4316-JPG-SW-XX-DR-C-1400. Pipe sizes and gradients are designed to be self-cleansing albeit regular maintenance and inspections are required to ensure the long-term efficiency of the systems.

All works should be undertaken by suitably qualified personnel and waste should be treated and removed by an appropriately registered company.

All drainage within the site boundary will remain private, Whitby Seafoods will be responsible for the maintenance and management of drainage system.

2.0 SEWERS

The main objective of maintenance document is to establish procedures to ensure the sewer system functions appropriately in the long term within an environment of fiscal control.

Maintenance includes:

-) Local repair or local replacement of damaged pipes or other structures in order to maintain the functioning of the sewer.
-) Cleaning and removal of sediments, obstructions etc. to restore hydraulic capacity.
-) Jetting/vacuum of sewers to be undertaken as often as necessary to remove silts and/or ordinary debris.
-) In the event that any extraordinary issues are encountered during an inspection, further information may be required such as a CCTV survey report.
-) Maintenance to be undertaken on a six monthly schedule.

To avoid damaging the pipe, PSI pressures need to be verified before jetting of plastic twin wall sewers. Cleaning of drainage systems may require the temporary sealing of the system and careful collection of the effluent for disposal off site.



3.0 FLOW CONTROL CHAMBER

The surface water drainage network has a discharge restriction of 3 litres per second.

Regular inspections of the flow control chamber should be carried out to ensure that debris that may obstruct the inlet to the flow control is not present. The frequency of inspection will depend on the location of the unit, it is recommended initial inspections should be on a 3 month basis for the first year of operation followed by a six monthly basis thereafter. The penstock should be checked and lubricated as necessary to ensure it will be operational should an emergency drain down be necessary.

In the event that the inlet to the control unit becomes blocked, the pivoting bypass door may be operated by pulling the wire rope attached upwards to drain down the chamber and provide access for maintenance.

As a secondary measure, a bypass pipe has been incorporated and fitted with a penstock over its inlet. The penstock is to be in the closed position and can be opened in the event of a failure within the flow control device. The lifting key for the penstock is to be fixed to the biscuit of the manhole within the chamber.

The location is shown on drawing number 4316-JPG-SW-XX-DR-C-1400.

4.0 DRAINAGE CHANNELS

The slot drain channels should be inspected regularly to ensure that the system continues to operate effectively and is free from damage and blockage by debris or solid objects.

The system should be cleaned at least once a year and incorporated into a planned maintenance schedule. The frequency of inspection and maintenance depends on the local environment and conditions.

Channel units can be cleaned through the use of a high-pressure hose. This can be fed into the system through access units.

The throat section of channel units should be kept clear at all times to ensure uninterrupted flow of surface runoff into the drainage channel. Any debris should be removed.

The seating areas for covers and grates should be cleaned before they are replaced. The covers and grates should be locked into position to prevent these being removed, stolen or dislodged by traffic. Locking bolts should be replaced and sufficiently tightened, taking care that the bolt heads do not stand above the top surface of the cover or grate. If grates/ covers are allowed to move within their frame, this may cause damage to the frame or seating.



5.0 ROAD GULLIES

Road gullies should be inspected regularly to ensure that the system continues to operate effectively and is free from damage and blockage by debris or solid objects.

The gullies should be cleaned at least once a year and incorporated into a planned maintenance schedule. The frequency of inspection and maintenance depends on the local environment and conditions.

The gully grating should be kept clear at all times to ensure uninterrupted flow of surface runoff into the gully. Any debris should be removed.

The seating areas for the grate should be cleaned before they are replaced. The covers and grates should be locked into position to prevent these being removed, stolen or dislodged by traffic.

6.0 DETENTION BASINS

Detention basins will require ongoing regular maintenance to ensure continuing operation to design performance standards. CIRIA's SUDS manual C753 Table 22.1 recommends the following maintenance regime for detention basins:

Maintenance Schedule	Required Action	Typical Frequency
Regular maintenance	Remove litter and debris	Monthly, or as required
	Cut Grass – for spillways and access routes	Monthly (during growing season), or as required
	Cut Grass – Meadow grass in and around basin	Half yearly (spring – before nesting season, and autumn)
	Manage other vegetation and remove nuisance plants	Monthly (at start, then as required)
	Inspect inlets, outlets and overflows for blockages, and clear if required.	Monthly
	Inspect banksides, structures pipeworks etc for evidence of physical damage.	Monthly
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Monthly (for first year), then annually or as required
	Check any penstocks and other mechanical devices	Annually
	Tidy all dead growth before start of growing season	Annually
	Remove sediment from inlets, outlets and forebay	Annually(or as required)
	Manage wetland plants in outlet pool – where provided	Annually
	Occasional maintenance	Resend areas of poor vegetation growth,
Prune and trim any trees and remove cuttings		Every 2 years, or as required
Remove sediment from inlets, outlets, forebay and main basin when required		Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided)
Remedial actions	Repair erosion or other damage by re-	As required



	reseeding or turfing	
	Realignment of rip-rap	As required
	Repair / rehabilitation of inlets, outlets and overflows	As required
	Relevel uneven surfaces and reinstate design levels	As required

7.0 MANHOLES/ACCESS CHAMBERS

All manhole covers should be lifted and the manholes visually inspected for silt, debris and signs of blockages within the drainage system. Check manhole covers and frames for damage and ensure correctly bolted together. This should be undertaken on a six monthly basis.

Should any debris or blockages be detected, the manholes should be cleaned along with associated pipe runs which should be high pressure jetted and CCTV surveyed to verify/identify that no further remedial works are required.

8.0 OIL SEPARATORS

There are 2 oil separators to be installed as part of the storm water drainage system. The locations are shown on drawing 4316-JPG-SW-XX-DR-C-1400.

In order to prevent pollution, the separators need to be regularly maintained. This should be carried out on a six-monthly basis by suitably qualified personnel.

Maintenance should be as follows:

-) Assess the depth of accumulated oil and silt.
-) Check the condition of any coalescing device and replace as necessary.
-) Service any electrical equipment i.e. alarms or management systems.
-) Physically inspect the integrity of the separator and any mechanical parts.

The separator should be emptied when oil/silt levels have significantly built up. All retained waste, including silt must be removed and the separator refilled with clean water. In the event of a spillage, the separator should be emptied. Emptying should be undertaken by a registered waste removal company, experienced in separator emptying.

Every five years, the separator should be emptied and given a general inspection to test its integrity and performance, after which the separator must be refilled with clean water.

A detailed log should be kept up when the separator has been inspected, maintained, emptied and serviced, along with records of any specific events relating to the system such as cleaning, spillages. Failure to carry out the maintenance may result in pollution of the environment.



9.0 HEALTH AND SAFETY

Employers shall, so far as is reasonably practical, provide and maintain systems of work that are safe and without risks to health. The systems of work shall cover all aspects of the works including above-ground operations (for example manhole location and traffic control), access to the sewer system and all operations in the confined space of the sewer system.

10.0 RECORD HISTORY

The site manager shall be responsible for recording and updating details of prior maintenance and operations, which can be made available for future reference.

The site manager shall also be responsible for scheduling future maintenance in accordance with the necessary requirements of each component, create a fixed timetable of routine checks and ensure that the maintenance is undertaken appropriately.

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SURFACE WATER DRAINAGE CALCULATIONS

**Whitby Seafoods
Whitby Business Park
Faifield Way
Whitby**

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CONTENTS

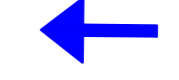











- 1.0 Drainage Summary**
- 2.0 Exceedance Plan**
- 3.0 Simulation Results**

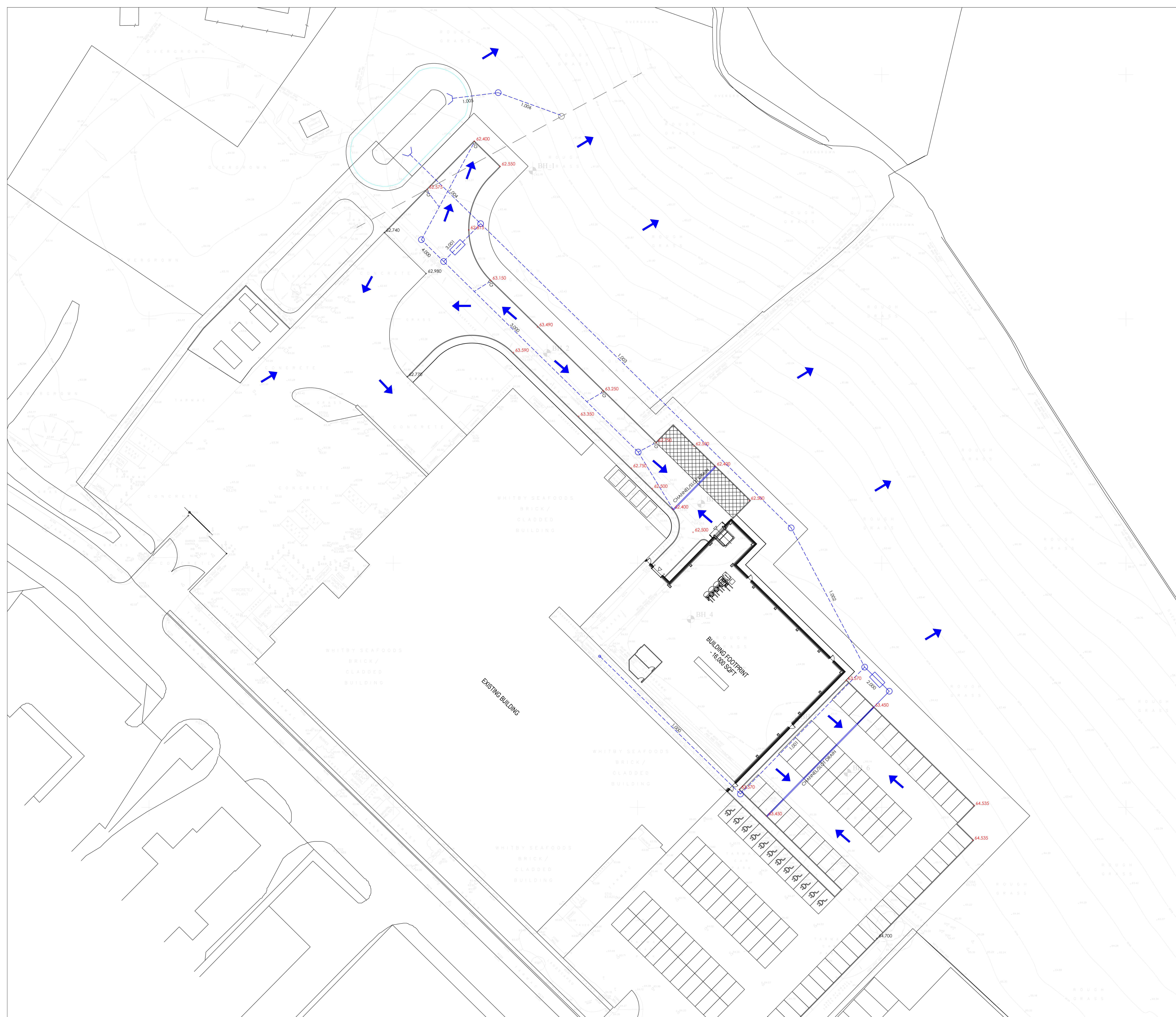


1.0 DRAINAGE SUMMARY

The Surface Water drainage is designed to discharge to the existing surface water drainage on site, flows will be restricted to a rate of 3l/s based on green field run off rates. The point of connection will be the existing manhole located within the existing development, this outfalls to the watercourse north of the development.

The calculated surface water attenuation volume required will be circa 300m³ for the 1 in 100 year event + 40% climate change.

- KEY**
-  EXCEEDANCE FLOW PATHS
 -  EXISTING FW DRAINS/SEWERS
 -  EXISTING SW DRAINS/SEWERS
 -  PROPOSED FW DRAINS/SEWERS
 -  PROPOSED SW DRAINS/SEWERS
 -  PROPOSED FW MANHOLE
 -  PROPOSED SW MANHOLE
 -  PROPOSED SYPHONIC DOWN PIPE
SIZE & LOCATION TBC. BY OTHERS
 -  PROPOSED DRAINAGE CHANNEL
SPECIFICATION AS NOTED ON PLAN
LAYOUT
 -  PROPOSED ROAD GULLY
 -  .62.500 EXISTING TIE IN LEVELS
 -  .62.500 PROPOSED LEVELS



REV	DESCRIPTION	DATE	BY
P01	FIRST ISSUE	09.08.19	BT

Project
WHITBY SEAFOODS,
WHITBY

Drawing Title
EXCEEDANCE PLAN

WORK IN PROGRESS

Architect



JPG Project Ref 4316	Scale of A0 1:250	Date ASD'19	Checked MOP	Drawn BT
4216 - JPG - SW - XX - M2 - C - 1401				50 P01



SIMULATION RESULTS

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STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

« - Indicates pipe capacity < flow

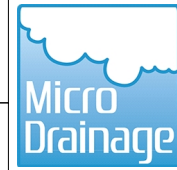
PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
1.000	40.000	0.400	100.0	0.040	4.00	0.0	0.600	o	225	Pipe/Conduit	🔒
1.001	36.300	0.240	151.3	0.027	0.00	0.0	0.600	o	225	Pipe/Conduit	🔒
2.000	7.000	0.100	70.0	0.127	5.00	0.0	0.600	o	225	Pipe/Conduit	🔒
1.002	32.200	0.214	150.5	0.070	0.00	0.0	0.600	o	225	Pipe/Conduit	🔒
1.003	89.000	0.281	316.7	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	🔒
3.000	55.700	0.368	151.4	0.080	4.00	0.0	0.600	o	225	Pipe/Conduit	🔒
4.000	6.400	0.303	21.1	0.031	4.00	0.0	0.600	o	150	Pipe/Conduit	🔒
3.001	11.000	0.042	261.9	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	🔒
1.004	20.000	0.080	250.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	🔒
1.005	9.500	0.040	237.5	0.040	0.00	0.0	0.600	o	300	Pipe/Conduit	🔒
1.006	14.000	0.140	100.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	🔒

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
1.000	50.00	4.51	62.590	0.040	0.0	0.0	0.0	1.31	52.0	5.4
1.001	49.41	5.08	62.190	0.067	0.0	0.0	0.0	1.06	42.2	9.0
2.000	49.43	5.07	62.050	0.127	0.0	0.0	0.0	1.57	62.2	17.0
1.002	47.42	5.58	61.950	0.264	0.0	0.0	0.0	1.06	42.3	33.9
1.003	41.94	7.27	61.661	0.264	0.0	0.0	0.0	0.88	62.1	33.9
3.000	50.00	4.88	61.790	0.080	0.0	0.0	0.0	1.06	42.2	10.8
4.000	50.00	4.05	61.800	0.031	0.0	0.0	0.0	2.20	38.9	4.2
3.001	49.31	5.10	61.422	0.111	0.0	0.0	0.0	0.80	31.9	14.8
1.004	41.02	7.61	61.380	0.375	0.0	0.0	0.0	0.99	70.0	41.7
1.005	40.61	7.77	61.300	0.415	0.0	0.0	0.0	1.02	71.8	45.6
1.006	40.01	8.00	61.260	0.415	0.0	0.0	0.0	1.00	17.8«	45.6

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Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall C. Level Name (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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1.006	62.000	61.120	0.000	0	0
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Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha	Storage 2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	1	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.100	Storm Duration (mins)	30
Ratio R	0.362		

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5 John Charles Way Leeds LS12 6QA	Whitby Seafoods Whitby Rev 1	
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Online Controls for Storm

Hydro-Brake® Optimum Manhole: 11, DS/PN: 1.006, Volume (m³): 2.6

Unit Reference	MD-SHE-0075-3000-1500-3000
Design Head (m)	1.500
Design Flow (l/s)	3.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	75
Invert Level (m)	61.260
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.500	3.0
Flush-Flo™	0.329	2.6
Kick-Flo®	0.671	2.1
Mean Flow over Head Range	-	2.4

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	2.1	1.200	2.7	3.000	4.1	7.000	6.1
0.200	2.5	1.400	2.9	3.500	4.4	7.500	6.3
0.300	2.6	1.600	3.1	4.000	4.7	8.000	6.5
0.400	2.6	1.800	3.3	4.500	5.0	8.500	6.7
0.500	2.5	2.000	3.4	5.000	5.2	9.000	6.9
0.600	2.3	2.200	3.6	5.500	5.5	9.500	7.1
0.800	2.2	2.400	3.7	6.000	5.7		
1.000	2.5	2.600	3.9	6.500	5.9		

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Storage Structures for Storm

Tank or Pond Manhole: 10, DS/PN: 1.005

Invert Level (m) 61.300

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	0.0	0.001	78.0	1.800	400.0

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
Hot Start Level (mm) 0 Inlet Coefficient 0.800
Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Storage Structures 1
Number of Online Controls 1 Number of Time/Area Diagrams 0
Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Ratio R 0.364
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 19.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0
Analysis Timestep 2.5 Second Increment (Extended)
DTS Status ON
DVD Status ON
Inertia Status ON

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
720, 960, 1440, 2160, 2880, 4320, 5760,
7200, 8640, 10080
Return Period(s) (years) 1, 30, 100
Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Winter	1	+0%	100/15 Summer	100/15 Summer		
1.001	2	15 Winter	1	+0%	30/15 Summer			
2.000	3	15 Winter	1	+0%	30/15 Summer	100/15 Summer		
1.002	4	15 Winter	1	+0%	30/15 Summer			
1.003	5	15 Winter	1	+0%	30/15 Summer			
3.000	6	15 Winter	1	+0%	30/120 Winter			
4.000	7	15 Summer	1	+0%	30/60 Winter			
3.001	8	240 Winter	1	+0%	30/15 Summer			
1.004	9	240 Winter	1	+0%	30/15 Summer			
1.005	10	240 Winter	1	+0%	1/60 Winter			
1.006	11	240 Winter	1	+0%	1/15 Summer			

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5 John Charles Way Leeds LS12 6QA	Whitby Seafoods Whitby Rev 1	
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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

PN	US/MH Name	Water		Surcharged		Flooded		Pipe Flow (l/s)	Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)				
1.000	1	62.640	-0.175	0.000	0.11		5.4	OK	4	
1.001	2	62.260	-0.155	0.000	0.21		8.2	OK		
2.000	3	62.144	-0.131	0.000	0.36		16.2	OK	4	
1.002	4	62.103	-0.072	0.000	0.78		31.1	OK		
1.003	5	61.815	-0.146	0.000	0.47		28.3	OK		
3.000	6	61.869	-0.146	0.000	0.25		10.3	OK		
4.000	7	61.836	-0.114	0.000	0.13		4.3	OK		
3.001	8	61.643	-0.004	0.000	0.11		3.0	OK		
1.004	9	61.642	-0.038	0.000	0.15		9.4	OK		
1.005	10	61.639	0.039	0.000	0.10		5.4	SURCHARGED		
1.006	11	61.688	0.278	0.000	0.16		2.6	SURCHARGED		

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5 John Charles Way Leeds LS12 6QA	Whitby Seafoods Whitby Rev 1	
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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
Hot Start Level (mm) 0 Inlet Coefficient 0.800
Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Storage Structures 1
Number of Online Controls 1 Number of Time/Area Diagrams 0
Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Ratio R 0.364
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 19.000 Cv (Winter) 0.840

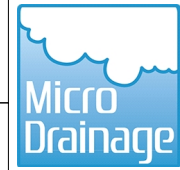
Margin for Flood Risk Warning (mm) 300.0
Analysis Timestep 2.5 Second Increment (Extended)
DTS Status ON
DVD Status ON
Inertia Status ON

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
720, 960, 1440, 2160, 2880, 4320, 5760,
7200, 8640, 10080
Return Period(s) (years) 1, 30, 100
Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Winter	30	+0%	100/15 Summer	100/15 Summer		
1.001	2	15 Winter	30	+0%	30/15 Summer			
2.000	3	15 Winter	30	+0%	30/15 Summer	100/15 Summer		
1.002	4	15 Winter	30	+0%	30/15 Summer			
1.003	5	360 Winter	30	+0%	30/15 Summer			
3.000	6	360 Winter	30	+0%	30/120 Winter			
4.000	7	360 Winter	30	+0%	30/60 Winter			
3.001	8	360 Winter	30	+0%	30/15 Summer			
1.004	9	360 Winter	30	+0%	30/15 Summer			
1.005	10	360 Winter	30	+0%	1/60 Winter			
1.006	11	360 Winter	30	+0%	1/15 Summer			

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

PN	US/MH Name	Water		Surcharged		Flooded		Pipe Flow (l/s)	Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m ³)	Flow / Cap. (l/s)	Flow (l/s)	Flow (l/s)			
1.000	1	62.669	-0.146	0.000	0.27	13.3		OK	4	
1.001	2	62.629	0.214	0.000	0.46	18.4		SURCHARGED		
2.000	3	62.682	0.407	0.000	0.79	35.0		SURCHARGED	4	
1.002	4	62.588	0.413	0.000	1.66	65.9		SURCHARGED		
1.003	5	62.105	0.144	0.000	0.20	12.2		SURCHARGED		
3.000	6	62.104	0.089	0.000	0.09	3.8		SURCHARGED		
4.000	7	62.103	0.153	0.000	0.04	1.5		SURCHARGED		
3.001	8	62.102	0.455	0.000	0.18	4.8		SURCHARGED		
1.004	9	62.101	0.421	0.000	0.26	15.7		SURCHARGED		
1.005	10	62.099	0.499	0.000	0.06	3.2		SURCHARGED		
1.006	11	62.109	0.699	0.000	0.16	2.6		SURCHARGED		

JPG (Leeds) Limited		Page 9
5 John Charles Way Leeds LS12 6QA	Whitby Seafoods Whitby Rev 1	
Date 09/08/2019 File	Designed by BT Checked by	
XP Solutions	Network 2017.1.2	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
Hot Start Level (mm) 0 Inlet Coefficient 0.800
Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Storage Structures 1
Number of Online Controls 1 Number of Time/Area Diagrams 0
Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Ratio R 0.364
Region England and Wales Cv (Summer) 0.750
M5-60 (mm) 19.000 Cv (Winter) 0.840
Margin for Flood Risk Warning (mm) 300.0
Analysis Timestep 2.5 Second Increment (Extended)
DTS Status ON
DVD Status ON
Inertia Status ON

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
720, 960, 1440, 2160, 2880, 4320, 5760,
7200, 8640, 10080
Return Period(s) (years) 1, 30, 100
Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
1.000	1	15 Winter	100	+40%	100/15 Summer	100/15 Summer		
1.001	2	15 Winter	100	+40%	30/15 Summer			
2.000	3	15 Winter	100	+40%	30/15 Summer	100/15 Summer		
1.002	4	15 Winter	100	+40%	30/15 Summer			
1.003	5	600 Winter	100	+40%	30/15 Summer			
3.000	6	600 Winter	100	+40%	30/120 Winter			
4.000	7	600 Winter	100	+40%	30/60 Winter			
3.001	8	600 Winter	100	+40%	30/15 Summer			
1.004	9	600 Winter	100	+40%	30/15 Summer			
1.005	10	600 Winter	100	+40%	1/60 Winter			
1.006	11	600 Winter	100	+40%	1/15 Summer			

JPG (Leeds) Limited		Page 10
5 John Charles Way Leeds LS12 6QA	Whitby Seafoods Whitby Rev 1	
Date 09/08/2019 File	Designed by BT Checked by	
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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water		Surcharged		Flooded		Pipe Flow (l/s)	Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m ³)	Flow / Cap. (l/s)	Overflow (l/s)				
1.000	1	63.503	0.688	2.966	0.47	23.0	FLOOD	4		
1.001	2	63.610	1.195	0.000	0.65	26.0	FLOOD RISK			
2.000	3	63.554	1.279	3.866	1.05	46.7	FLOOD	4		
1.002	4	63.546	1.371	0.000	2.26	89.8	FLOOD RISK			
1.003	5	62.617	0.656	0.000	0.23	13.9	SURCHARGED			
3.000	6	62.616	0.601	0.000	0.11	4.3	FLOOD RISK			
4.000	7	62.614	0.664	0.000	0.05	1.6	FLOOD RISK			
3.001	8	62.614	0.967	0.000	0.21	5.8	SURCHARGED			
1.004	9	62.613	0.933	0.000	0.32	19.6	SURCHARGED			
1.005	10	62.610	1.010	0.000	0.09	4.7	SURCHARGED			
1.006	11	62.622	1.212	0.000	0.17	2.9	SURCHARGED			

**Town and Country Planning Act 1990
North York Moors National Park Authority**

**Notice of Decision of Planning Authority on Application for
Permission to Carry out Development**

To: Whitby Seafoods Ltd
c/o Celsius Consulting Ltd
fao: Mr Simon Banks
Carrwood Park
Swillington Common Farm
Selby Road
Leeds
LS15 4LG

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The above named Authority being the Planning Authority for the purposes of your application validated 14 June 2018, in respect of proposed development for the purposes of **construction of warehouse and plant room extensions together with extension to and resurfacing of existing car park, internal access roadway and turning head, reinforced skip area, associated regrading of land and landscaping works together with installation of 2 no. flues to existing building at Whitby Seafoods Ltd, Fairfield Way, Whitby**, has considered your application and has **granted** permission for the proposed development subject to the following conditions:

1. The development hereby permitted shall be commenced before the expiration of three years from the date of this permission.
2. The development hereby permitted shall not be carried out other than in strict accordance with the following documents:

Document Description	Document No.	Date Received
Location plan	10002/A/150/005 A1	6 June 2018
Proposed site masterplan	10002/A/150/003 A1 Rev B	6 June 2018
Proposed internal layout	10002/A/150/004 A1 Rev B	6 June 2018
Proposed factory layout	10002/A/100/002 A1 Rev B	6 June 2018
Proposed elevations	10002/A/140/024 A1 Rev B	6 June 2018
Site levels	10002/A/120/001A1	28 June 2018
Land drainage plans	---	5 September 2018

- or in accordance with any minor variation thereof that may be approved in writing by the Local Planning Authority
3. The premises shall not be used other than as a warehouse and plant room and shall not be used for any other purpose (including any other purpose in Class B1, B2 or B8 of the Schedule to the Town and Country Planning (Use Classes) Order 2010 or in any provision equivalent to that Class in any statutory instrument revoking and re-enacting that Order, or within Schedule 2, Part 3, Classes A-V of the Town and Country Planning (General Permitted Development) Order 2015 (or any order revoking and re-enacting that Order).
4. The external surfaces of the building hereby permitted shall, within three months of first being brought into use, be coloured and thereafter maintained the colours as specified in approved drawing no. 10002/A/140/002 A1 Rev B or as may otherwise be agreed in writing with the Local Planning Authority.

Continued overleaf/Conditions

Mr C M France
Director of Planning

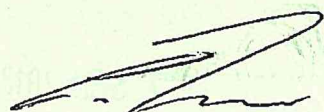
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Date ... 07 SEP 2018

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5. No work shall commence on excavation works to install drainage to serve the development hereby permitted until full details of a scheme detailing foul and surface water drainage has been submitted to and approved in writing by the Local Planning Authority. The scheme shall detail phasing of the development and phasing of drainage provision, where appropriate. Principles of sustainable urban drainage shall be employed wherever possible. The works shall be implemented in accordance with the approved phasing. No part or phase of the development shall be brought into use until the drainage works approved for that part or phase has been completed.
6. No work shall commence on excavation works to install drainage to serve the development hereby permitted until a scheme restricting the rate of development flow runoff from the site has been submitted to and approved in writing by the Local Planning Authority. The flowrate from the site shall be restricted to a maximum flowrate of 3 litres per second for up to the 1 in 100 year event. A 40% allowance shall be included for climate change effects for the lifetime of the development. Storage shall be provided to accommodate the minimum 1 in 100 year plus climate change critical storm event (345m³). The scheme shall include a detailed maintenance and management regime for the storage facility. No part of the development shall be brought into use until the development flow restriction works comprising the approved scheme has been completed. The approved maintenance and management scheme shall be implemented throughout the lifetime of the development.
7. The development shall not commence on the construction of the car park until a scheme, detailing the treatment of all surface water flows from parking areas and hardstanding through the use of road side gullies, oil interceptors, reed beds or alternative treatment systems, has been submitted to and approved in writing by the Local Planning Authority. Use of the parking areas/hardstanding shall not commence until the works comprising the approved treatment scheme have been completed. Roof water shall not pass through the treatment scheme. Treatment shall take place prior to discharge from the treatment scheme. The treatment scheme shall be retained, maintained to ensure efficient working and used throughout the lifetime of the development.
8. No work shall commence on excavation works to install drainage until an appropriate Exceedance Flow Plan for the site has been submitted to and approved in writing by the Local Planning Authority. Site design must be such that when SuDS features fail or are exceeded, exceedance flows do not cause flooding of properties on or off site. This is achieved by designing suitable ground exceedance or flood pathways. Runoff must be completely contained within the drainage system (including areas designed to hold or convey water) for all events up to a 1 in 30 year event. The design of the site must ensure that flows resulting from rainfall in excess of a 1 in 100 year rainfall event are managed in exceedance routes that avoid risk to people and property both on and off site.
9. All hard and soft landscape works comprised in the approved details of landscaping shall be carried out no later than the first planting and seeding seasons following the occupation of the buildings or the completion of the development, whichever is the sooner, or in accordance with a programme agreed by the Local Planning Authority. Any trees or plants planted in accordance with this condition which, within a period of five years from the completion of the development, die, are removed or become seriously damaged or diseased shall be replaced in the current or next planting season with others of similar size and species unless the Local Planning Authority gives written consent to any variation.

Continued overleaf/Conditions



Mr C M France
Director of Planning

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Date 07 SEP 2018

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10. No work shall commence to clear the site in preparation for the development hereby permitted until full details of the hardsurfacing to be utilised on the site have been submitted to and approved in writing by the Local Planning Authority, including a timetable to implement the proposed works. The hard landscaping works shall then be implemented in accordance with the approved details. The hard landscaping shall be maintained in perpetuity unless otherwise agreed in writing by the Local Planning Authority.

Reasons for Conditions

1. To ensure compliance with Sections 91 to 94 of the Town and Country Planning Act 1990 as amended.
2. For the avoidance of doubt and to ensure that the details of the development comply with the provisions of NYM Core Policy A and NYM Development Policy 3, which seek to conserve and enhance the special qualities of the NYM National Park.
3. In order to enable the Local Planning Authority to retain control over future changes of use to the property which would otherwise be permitted by the Town and Country Planning (Use Classes) Order 2010 (or in any provision equivalent to that Class in any statutory instrument revoking and re-enacting that Order) or the Town and Country Planning (General Permitted Development) Order 2015 (or any order revoking and re-enacting that Order), and to comply with the provisions of NYM Core Policy A and NYM Development Policy 3, which seek to enhance and conserve the special qualities of the NYM National Park and ensure that development does not have an adverse effect on the amenities of adjoining occupiers.
4. For the avoidance of doubt and in order to comply with the provisions of NYM Core Policy A and NYM Development Policy 3 which seek to ensure that building materials are of a high quality and compatible with the character of the locality and that the special qualities of the National Park are safeguarded.
- 5 & 6. In order to comply with the provisions of NYM Development Policy 2 to ensure the provision of adequate and sustainable means of drainage in the interests of amenity and flood risk.
- 7 & 8. To avoid pollution of watercourses and to comply with the provisions of NYM Development Policy 1, which seeks to ensure that new development has satisfactory provision for the disposal of foul and surface water.
9. In order to comply with the provisions of NYM Development Policy 3 which seeks to ensure that new development incorporates a landscaping scheme which is appropriate to the character of the locality and retains important existing features.
10. In the interests of the satisfactory appearance of the development and in order to comply with the provisions of NYM Development Policy 3 which seeks to ensure that development proposals incorporate suitable hard landscaping details.

Explanation of how the Authority has Worked Positively with the Applicant/Agent

The Authority's Officers have appraised the scheme against the Development Plan and other material considerations and confirmed to the applicant/agent that the development is likely to improve the economic, social and environmental conditions of the area.



Mr C M France
Director of Planning

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07 SEP 2018

Date

Rights of Appeal

- (1) If the applicant is aggrieved by the decision of the Local Planning Authority to refuse permission or approval for the proposed development, or to grant permission or approval subject to conditions, they may appeal to the Secretary of State of Department of Communities and Local Government in accordance with Section 78 of the Town and Country Planning Act 1990, within six months of the date of this notice (12 weeks in the case of a minor commercial application). The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal. The Secretary of State need not consider an appeal if it seems to the Secretary of State that the Local Planning Authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

In practice, the Secretary of State does not refuse to consider appeals solely because the Local Planning Authority based their decision on a direction given by him.

- (2) If permission to develop land is refused, or granted subject to conditions, whether by the Local Planning Authority or by the Secretary of State, the owner of the land may claim that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by the carrying out of any development which has been or would be permitted, he may serve on the council of the county/district in which the land is situated a purchase notice requiring that council to purchase his interest in the land in accordance with the provisions of Part VI of the Town and Country Planning Act 1990.

Note: If an aggrieved applicant wishes to exercise their right of appeal as above mentioned, they should do so using a form which you can get from the Secretary of State at:

Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6PN (Tel: 0303 444 00 00) or online at www.planningportal.gov.uk/planning/appeals

Notes

1. Please note, only the applicant possesses the right of appeal.
2. No consent, permission or approval hereby given absolves the applicant from the necessity of obtaining the approval, under the Building Regulations, of the District Council in whose area the site of the proposed Development is situated; or of obtaining approval under any other Bye-Laws, local Acts, orders, regulations and statutory provisions in force; and no part of the proposed development should be commenced until such further approval has been obtained.
3. In your own interests your attention is particularly drawn to the conditions under which approval has been given to your proposals. Failure to comply fully with the conditions could lead to enforcement action resulting in work already done being demolished or prosecution in Magistrates' Court.
4. If this is a decision on a planning application relating to the same or substantially the same land and development as is already the subject of an enforcement notice, if you want to appeal against your Local Planning Authority's decision on your application, then you must do so within 28 days of the date of this notice.
5. If an enforcement notice is served relating to the same or substantially the same land and development as in your application and if you want to appeal against your Local Planning Authority's decision on your application, then you must do so within: 28 days of the date of service of the enforcement notice, or within 6 months (12 weeks in the case of a householder appeal) of the date of this notice, whichever period expires earlier.