REFER TO DRAWING P19-138-RS-305

REFER TO DRAWING P19-138-RS-301

REFER TO DRAWING P19-138-RS-302

REFER TO DRAWING P19-138-RS-303

BALEMI ROAD

SH1 / WAIKATO EXPRESSWAY NORTHBOUND

SH1 / WAIKATO EXPRESSWAY SOUTHBOUND

LUMSDEN ROAD

NORTH ISLAND MAIN TRUNK LINE (KIWIRAIL)

LUMSDEN ROAD

B1

B2

B3

B4

B5

NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH WAIKATO DISTRICT COUNCIL STANDARDS AND WATERCARE STANDARDS
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE)
3. CONCRETE PIPES ARE TO BE CLASS 2 (X) RRJ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED
5. ALL MANHOLES ARE TO BE 1050mm DIA UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE
6. ALL SW AND SS 100mm DIA RAMPED RISERS ARE TO BE EXTENDED AND CAPPED OFF 1 0m BELOW THE FINISHED GROUND SURFACE
7. ALL CATCHPITS ARE TO BE STANDARD 675mm X 450mm
8. THE CONTRACTOR IS TO PEG MANHOLES AND CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE CENTRE TO MANHOLE CENTRE THIS MAY RESULT IN CREEP (ON STEEP SITES PARTICULARLY) AND THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS

LEGEND

- STAGE BOUNDARY
- ACO DRAINS
- STORMWATER LINE
- STORMWATER DOWNPIPE
- ACO DRAIN MAINTENANCE PIT
- STORMWATER MANHOLE
- TEMPORARY STORMWATER MANHOLE
- TEMPORARY STORMWATER CATCHPIT
- WINGWALL
- FLOW DIRECTION

SCALEBAR (m) 0 25 50 125

SCALE | 1:2500 @A3 | 1:1250 @A1|

REVISION DETAILS		INT	DATE
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020

SURVEYED	RH
DESIGNED	BP
DRAWN	HS
CHECKED	BP
APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
STORMWATER LAYOUT - OVERALL COMPLETED FACTORY

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:2500 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-300-DR	

BALEMI ROAD

BALEMI ROAD

RL 8 0

MAINTENANCE TRACK SAFETY BENCH

DEEP MARSH

SHALLOW MARSH

SHALLOW MARSH

OUTLET POOL

INTERMEDIATE POOL

IL 6 1

DEEP MARSH

MAINTENANCE TRACK SAFETY BENCH

FOREBAY

LEVEL SPREADER (RL 7 0)

PROPOSED WETLAND INLET WINGWALL

WETLAND 1 OUTLET PIPEWORK TO BYPASS SWALE TO CENTRAL PARK

COLLECTION SWALE FOR WETLAND 2

PROPOSED QMAX - 600 CHANNEL WITH Q-FLOW GALVANISED STEEL RAIL GRATE

PROPOSED ACO DRAIN MAINTENANCE PITS AT 60m SPACINGS

OUTLET MANHOLE WITH ORIFICE FOR WATER QUALITY EVENT AND 10 YEAR STORAGE

PROPOSED SW PIPELINE

PROPOSED TEMPORARY ACCESS TO BALEMI ROAD SW FLOWS CAPTURED BY ROADSIDE SWALE AND DIVERTED TO WETLAND

PROPOSED QMAX - 600 CHANNEL WITH Q-FLOW GALVANISED STEEL RAIL GRATE

PROPOSED ACO DRAIN MAINTENANCE PITS AT 60m SPACINGS

PROPOSED SW MANHOLE

PROPOSED QMAX - 600 CHANNEL WITH Q-FLOW GALVANISED STEEL RAIL GRATE

PROPOSED RAINWATER TANK FOR REUSE

PROPOSED SW DOWNPIPE DISCHARGE NETWORK

B1

B4

PROPOSED SW PIPELINE

SH1 / WAIKATO EXPRESSWAY SOUTHBOUND

NORTH ISLAND MAIN TRUNK LINE (KIWIRAIL)

PROPOSED QMAX - 600 CHANNEL WITH Q-FLOW GALVANISED STEEL RAIL GRATE

PROPOSED SW DOWNPIPE DISCHARGE NETWORK

B2

LUMSDEN ROAD

PROPOSED QMAX - 600 CHANNEL WITH Q-FLOW GALVANISED STEEL RAIL GRATE

B3

B5

PROPOSED SW DOWNPIPE DISCHARGE NETWORK

PROPOSED ACO DRAIN MAINTENANCE PITS AT 60m SPACINGS

PROPOSED TEMPORARY SW PIPELINE

PROPOSED TEMPORARY CATCHPIT

LEGEND

- STAGE BOUNDARY
- ACO DRAINS
- STORMWATER LINE
- STORMWATER DOWNPIPE
- ACO DRAIN MAINTENANCE PIT
- STORMWATER MANHOLE
- TEMPORARY STORMWATER MANHOLE
- TEMPORARY STORMWATER CATCHPIT
- WINGWALL
- FLOW DIRECTION

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	RH
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020	DESIGNED	BP
				DRAWN	HS
				CHECKED	BP
				APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
STORMWATER LAYOUT

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1500 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-301-DR	

WOODS
EST.1970

BALEMI ROAD

WETLAND 1 OUTLET PIPEWORK TO BYPASS SWALE TO CENTRAL PARK

COLLECTION SWALE FOR WETLAND 2 (CULVERTED UNDER VEHICLE CROSSING)

PROPOSED ACO DRAIN MAINTENANCE PITS AT 60m SPACINGS

PROPOSED QMAX - 600 CHANNEL WITH Q-FLOW GALVANISED STEEL RAIL GRATE

PROPOSED SW MANHOLE

PROPOSED SW WINGWALL

COLLECTION SWALE TO WETLAND 2 FOREBAY

WETLAND 2 FOREBAY

BYPASS SWALE TO CENTRAL PARK

PROPOSED SW PIPELINE

DEEP MARSH

CULVERT SIZED FOR 100 YEAR ARI EVENT

CULVERTS UNDER RAIL SIDING EMBANKMENT

SHALLOW MARSH

LEGEND

- STAGE BOUNDARY
- ACO DRAINS
- STORMWATER LINE
- STORMWATER DOWNPIPE
- ACO DRAIN MAINTENANCE PIT
- STORMWATER MANHOLE
- TEMPORARY STORMWATER MANHOLE
- TEMPORARY STORMWATER CATCHPIT
- WINGWALL
- FLOW DIRECTION

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020

SURVEYED	RH
DESIGNED	BP
DRAWN	HS
CHECKED	BP
APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY - RAIL SIDING
STORMWATER LAYOUT - SHEET 1 OF 2

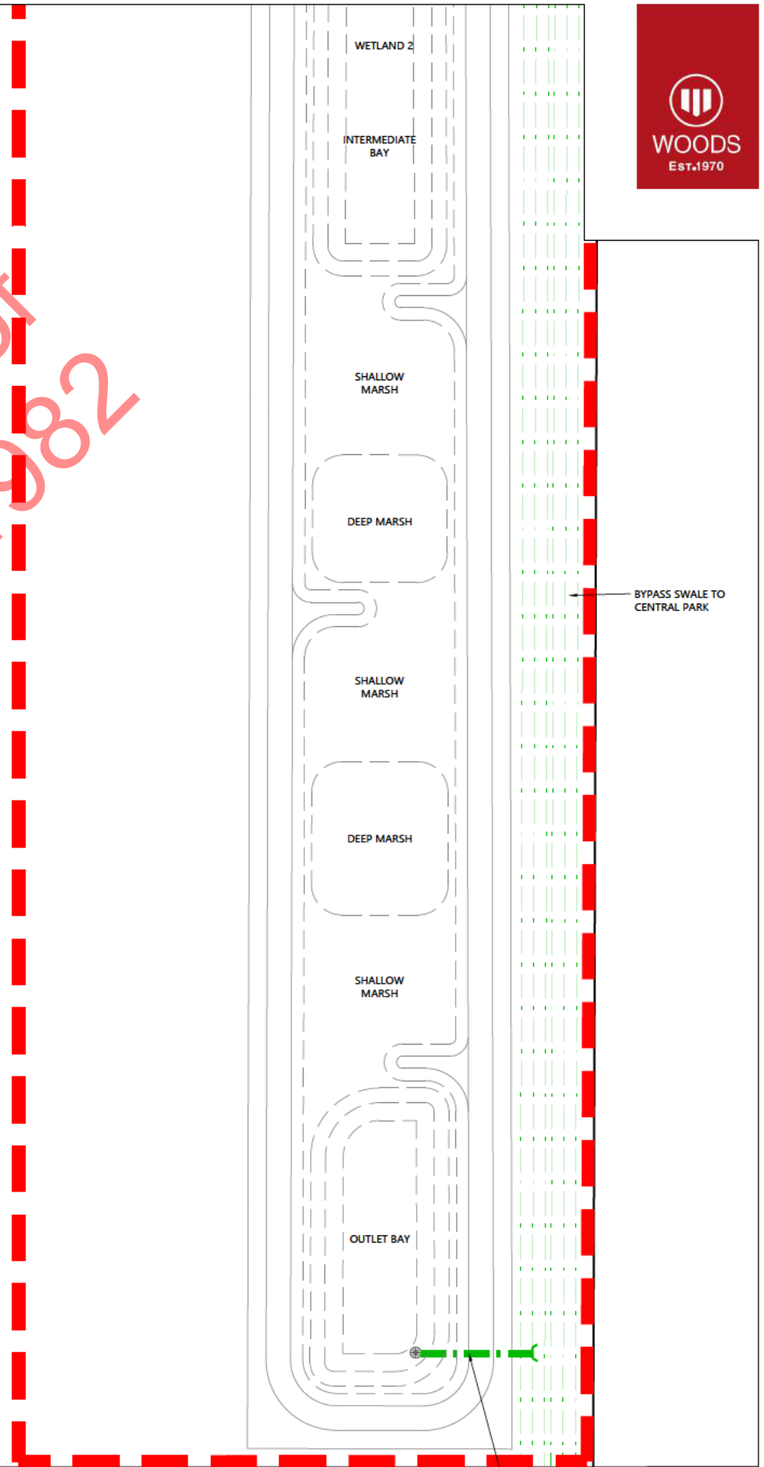
N

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	WAIKATO DISTRICT COUNCIL
DWG NO	P19-138-RS-302-DR

REV 1

LEGEND

- STAGE BOUNDARY
- ACO DRAINS
- STORMWATER LINE
- STORMWATER DOWNPIPE
- ACO DRAIN MAINTENANCE PIT
- STORMWATER MANHOLE
- TEMPORARY STORMWATER MANHOLE
- TEMPORARY STORMWATER CATCHPIT
- WINGWALL
- FLOW DIRECTION



WOODS EST.1970

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020

SURVEYED	RH
DESIGNED	BP
DRAWN	HS
CHECKED	BP
APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY - RAIL SIDING
STORMWATER LAYOUT - SHEET 2 OF 2

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-303-DR	

LEGEND

- STAGE BOUNDARY
- ACO DRAINS
- STORMWATER LINE
- STORMWATER DOWNPIPE
- ACO DRAIN MAINTENANCE PIT
- STORMWATER MANHOLE
- TEMPORARY STORMWATER MANHOLE
- TEMPORARY STORMWATER CATCHPIT
- WINGWALL
- FLOW DIRECTION

BALEMI ROAD

CESSPITS TO BE UTILISED UNTIL DRAINAGE LEVEL DISCHARGES INTO BALEMI ROAD SWALES/TABLE DRAINS

SW DRAINAGE COLLECTED BY PIPED NETWORK AND CESSPITS AT HIGH SIDE OF ROAD

TABLE DRAINS TO BE REALINGED FROM LUMSDEN ROAD TO BALEMI ROAD

CULVERT UNDER RAIL SIDING

EXISTING TABLE DRAINS TO BE REALINGED ON LUMSDEN ROAD

CESSPITS TO COLLECT SW AT INTERSECTION

CULVERT UNDER RAIL SIDING

LOW POINT IN SWALE TO BE DIVERTED TO PIPED NETWORK

PROPOSED SW SWALES/DRAINAGE DITCHES

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020

SURVEYED	RH
DESIGNED	BP
DRAWN	HS
CHECKED	BP
APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

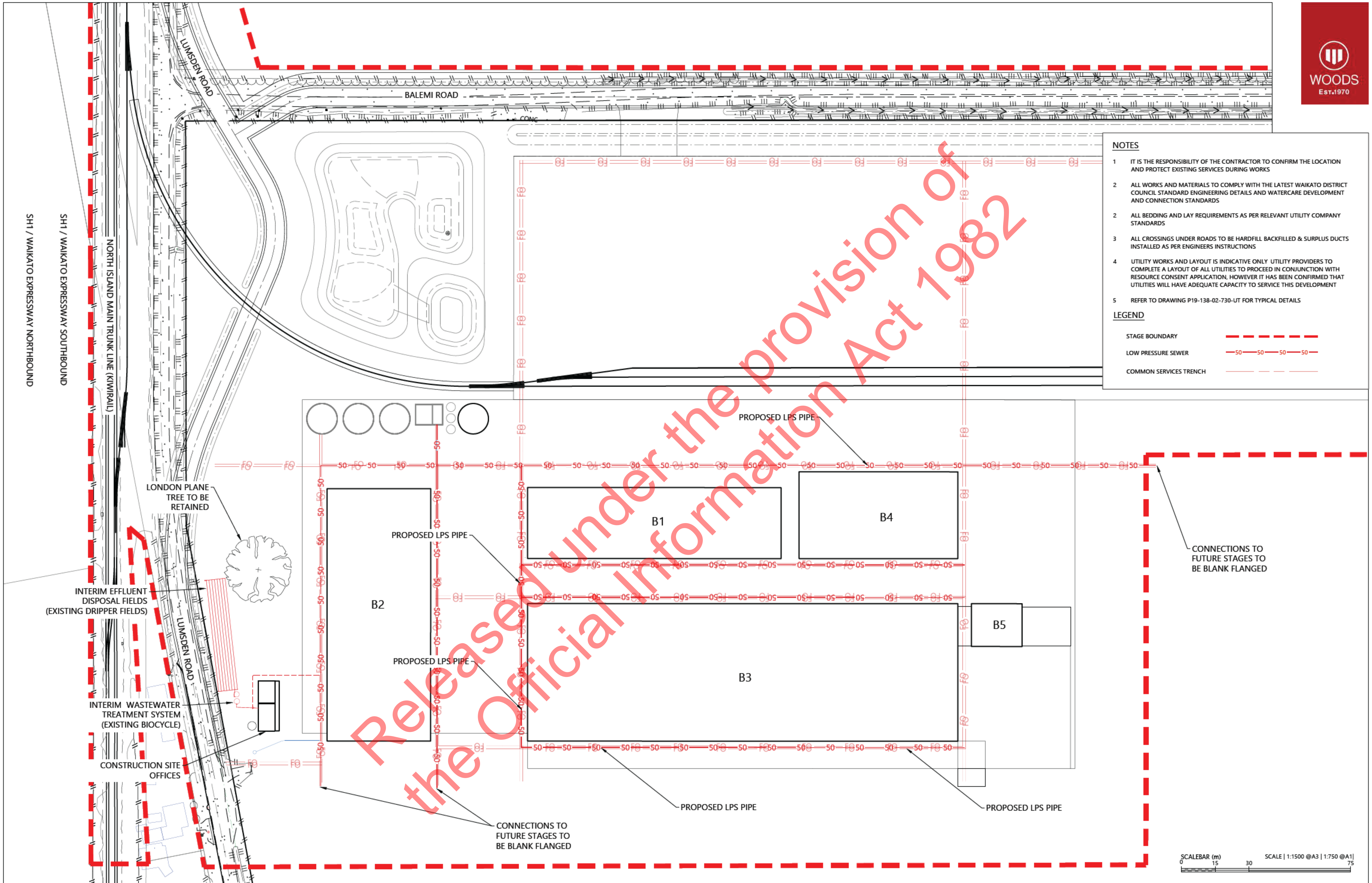
the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY - INTERSECTION UPGRADE
STORMWATER LAYOUT

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	WAIKATO DISTRICT COUNCIL
DWG NO	P19-138-RS-305-DR

REV 1



NOTES

1 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION AND PROTECT EXISTING SERVICES DURING WORKS

2 ALL WORKS AND MATERIALS TO COMPLY WITH THE LATEST WAIKATO DISTRICT COUNCIL STANDARD ENGINEERING DETAILS AND WATERCARE DEVELOPMENT AND CONNECTION STANDARDS

2 ALL BEDDING AND LAY REQUIREMENTS AS PER RELEVANT UTILITY COMPANY STANDARDS

3 ALL CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED & SURPLUS DUCTS INSTALLED AS PER ENGINEERS INSTRUCTIONS

4 UTILITY WORKS AND LAYOUT IS INDICATIVE ONLY. UTILITY PROVIDERS TO COMPLETE A LAYOUT OF ALL UTILITIES TO PROCEED IN CONJUNCTION WITH RESOURCE CONSENT APPLICATION, HOWEVER IT HAS BEEN CONFIRMED THAT UTILITIES WILL HAVE ADEQUATE CAPACITY TO SERVICE THIS DEVELOPMENT

5 REFER TO DRAWING P19-138-02-730-UT FOR TYPICAL DETAILS

LEGEND

- STAGE BOUNDARY
- LOW PRESSURE SEWER
- COMMON SERVICES TRENCH

WOODS
EST.1970

REVISION DETAILS		INT	DATE	SURVEYED	RH
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020	DESIGNED	BP
				DRAWN	HS
				CHECKED	BP
				APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
WASTEWATER LAYOUT - SHEET 1 OF 2

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1500 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-501-DR	

WOODS
EST.1970

BALEMI ROAD

NORTH ISLAND MAIN TRUNK LINE (KIWIRAIL)

LUMSDEN ROAD (REALIGNED)

3X SMALL TANKS FOR POTABLE WATER TREATMENT PROCESS

RAINWATER REUSE TANK

WATER SUPPLY & TREATMENT PLANT ROOM

SPRINKLER PUMP PLANT ROOM

3X SPRINKLER WATER RESERVOIRS

DN50mmØ WATER SUPPLY RING MAIN

SPRINKER SUPPLY RING MAIN REFER TO HOLMES REPORT FOR DETAILS

CONNECTIONS TO FUTURE STAGES TO BE BLANK FLANGED

LINES FOR FUTURE LOT CONNECTIONS

CAMLOCK COUPLINGS PROVIDED FOR MANUAL REFILLING OF TANKS

B1

B4

B2

B5

B3

DN150mmØ HYDRANT RING MAIN REFER TO HOLMES REPORT FOR DETAILS HYDRANTS PLACED BETWEEN BUILDINGS

PROPOSED SITE SHED AND FACILITIES

EXISTING BORE

UNTREATED BORE SUPPLY TO TREATMENT PLANT

DN50mmØ WATER SUPPLY RING MAIN

SPRINKER SUPPLY RING MAIN REFER TO HOLMES REPORT FOR DETAILS

CONNECTIONS TO FUTURE STAGES TO BE BLANK FLANGED

NOTES

1. ALL WORK AND MATERIALS TO COMPLY WITH WAIKATO DISTRICT COUNCIL STANDARD ANY AMBIGUITY BETWEEN THESE DRAWINGS AND COUNCIL STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION
2. ALL WATERMAIN ROAD CROSSINGS ARE TO BE HARDFILL BACKFILLED
3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY COUNCIL. CONNECTIONS TO BE MADE IN ACCORDANCE WITH COUNCIL'S ALC POLICY
4. WATERMAINS ARE TO BE INSTALLED 1.1m OFF THE ROAD RESERVE BOUNDARY THE STANDARD LAY POSITION IS SHOWN ON THE TYPICAL ROAD CROSS SECTION DRAWING

LEGEND

PROPOSED POTABLE SUPPLY — 50 50 50

PROPOSED SPRINKLER SUPPLY — W

PROPOSED UNTREATED SUPPLY — W

REVISION DETAILS		INT	DATE
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020

SURVEYED	RH
DESIGNED	BP
DRAWN	BP
CHECKED	BP
APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
INTERIM WATER SUPPLY LAYOUT - STAGE RAIL SIDING SHEET 1 OF 2

N

		REV
STATUS	ISSUED FOR CONSENT	1
SCALE	1:1500 @ A3	
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-681-WS	

WOODS
EST.1970

BALEMI ROAD

50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50
W W W W W W W W W W W W W W W W W W W W W W W W W

DN50mmØ WATER SUPPLY RING MAIN

SPRINKER SUPPLY RING MAIN REFER TO HOLMES REPORT FOR DETAILS

50 W 50 50 W 50 50 W 50 50

CONNECTIONS TO FUTURE STAGES TO BE BLANK FLANGED

NOTES

1 ALL WORK AND MATERIALS TO COMPLY WITH WAIKATO DISTRICT COUNCIL STANDARD ANY AMBIGUITY BETWEEN THESE DRAWINGS AND COUNCIL STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION

2 ALL WATERMAIN ROAD CROSSINGS ARE TO BE HARDFILL BACKFILLED

3 CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY COUNCIL CONNECTIONS TO BE MADE IN ACCORDANCE WITH COUNCIL'S ALC POLICY

4 WATERMAINS ARE TO BE INSTALLED 1.1m OFF THE ROAD RESERVE BOUNDARY THE STANDARD LAY POSITION IS SHOWN ON THE TYPICAL ROAD CROSS SECTION DRAWING

LEGEND

PROPOSED POTABLE SUPPLY — 50 — 50 — 50 —

PROPOSED SPRINKLER SUPPLY — — W — —

PROPOSED UNTREATED SUPPLY — — W — —

REVISION DETAILS		INT	DATE		
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020	SURVEYED	RH
				DESIGNED	BP
				DRAWN	BP
				CHECKED	BP
				APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
INTERIM WATER SUPPLY LAYOUT - STAGE RAIL SIDING SHEET 2 OF 2

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-682-WS	

WOODS
EST.1970

REFER TO DRAWING P19-138-RS-901

BALEMI ROAD

SH1 / WAIKATO EXPRESSWAY NORTHBOUND

SH1 / WAIKATO EXPRESSWAY SOUTHBOUND

B1

B2

B3

B4

B5

NORTH ISLAND MAIN TRUNK LINE (KIWIRAIL)

LUMSDEN ROAD

NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH WAIKATO DISTRICT COUNCIL STANDARDS AND WATERCARE STANDARDS
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE)
3. CONCRETE PIPES ARE TO BE CLASS 2 (X) RRJ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE
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5. ALL MANHOLES ARE TO BE 1050mm DIA UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE
6. ALL SW AND SS 100mm DIA RAMPED RISERS ARE TO BE EXTENDED AND CAPPED OFF 1 0m BELOW THE FINISHED GROUND SURFACE
7. ALL CATCHPITS ARE TO BE STANDARD 675mm X 450mm
8. THE CONTRACTOR IS TO PEG MANHOLES AND CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE CENTRE TO MANHOLE CENTRE THIS MAY RESULT IN CREEP (ON STEEP SITES PARTICULARLY) AND THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS

LEGEND

STAGE BOUNDARY

SPRINKLER DISCHARGE PIPES

SCALEBAR (m) 0 25 50 125

SCALE | 1:2500 @A3 | 1:1250 @A1|

REVISION DETAILS		INT	DATE
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020

SURVEYED	RH
DESIGNED	BP
DRAWN	HS
CHECKED	BP
APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

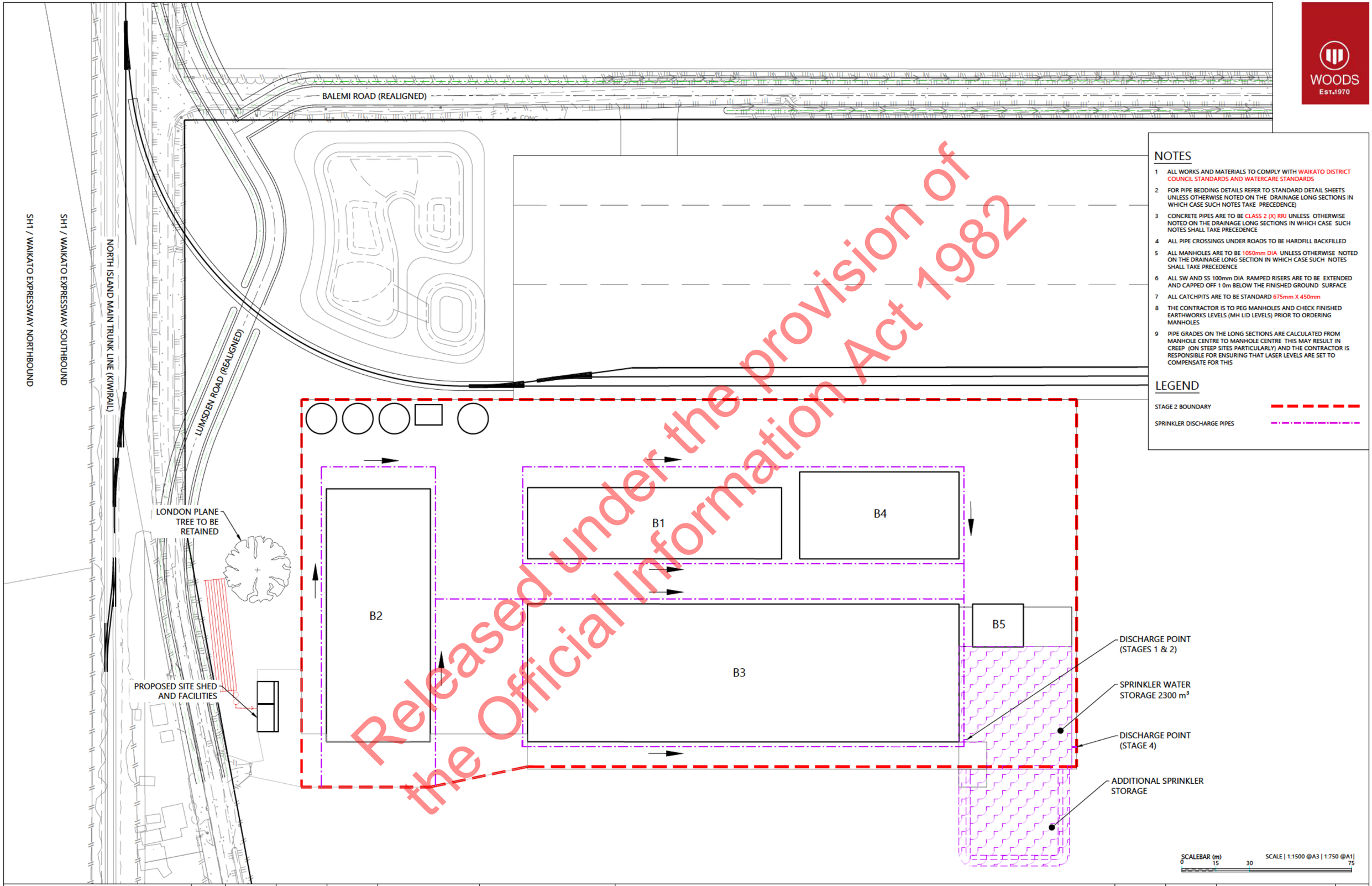
the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
SPRINKLER DRAINAGE - OVERALL COMPLETED FACTORY

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:2500 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-900-DR	



WOODS
EST.1970

NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH WAIKATO DISTRICT COUNCIL STANDARDS AND WATERCARE STANDARDS
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE)
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9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE CENTRE TO MANHOLE CENTRE THIS MAY RESULT IN CREEP (ON STEEP SITES PARTICULARLY) AND THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS

LEGEND

STAGE 2 BOUNDARY

SPRINKLER DISCHARGE PIPES

REVISION DETAILS		INT	DATE	SURVEYED	RH
1	ISSUED FOR FAST TRACK CONSENT	HS	17/08/2020	DESIGNED	BP
				DRAWN	HS
				CHECKED	BP
				APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY - STAGE RAIL SIDING
SPRINKLER DRAINAGE - OVERLAY STAGE 2 LAYOUT

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1500 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-901-DR	

Appendix D – Record of Consultation and Engagement

17 August 2020

Bloxam Burnett & Olliver

P.O Box 9041

Hamilton 3240

Attention: Stuart Penfold and John Olliver

Cc: David Gaze of Gaze Holdings Ltd

Re: Sleepyhead Foam Factory, Rail Siding and Earthworks, Ohinewai
COVID-19 Recovery Fast-Track Consent – Application to the Minister for the Environment

E ngā rangatira, tēnā kōrua ko John ko Stuart

In the spirit of the relationship between iwi and mana whenua of Ohinewai with Ambury Properties Ltd (APL) and New Zealand Comfort Group (NZCG), this letter is an acknowledgement that engagement has been undertaken prior to the lodgement of an application to the Minister for the Environment for referral to an expert consenting panel for the Sleepyhead Foam Factory, Rail Siding and associated earthworks at Ohinewai.

To facilitate the effectiveness and efficiency of iwi and mana whenua involvement in the Sleepyhead Estate development, the Tangata Whenua Governance Group (TWGG) was established. The representative and mandated iwi and mana whenua organisations on the TWGG are:

- Nga Muka Development
- Waahi Whaanui Trust
- Te Riu o Waikato, and
- Waikato-Tainui (Te Whakakitenga o Waikato)

In varying capacities, the TWGG perform the role, and carry the responsibilities, of kaitiaki in the Ohinewai area, and address the different needs and aspirations of our members/beneficiaries, whilst also provide representation for them as mana whenua in these resource management systems. Our cultural and environmental values are extensive across the site and is interconnected with other sites, nodes and prominent features within the catchment.

Over the course of 12 months, APL has been sharing information to the TWGG about the overall Sleepyhead Estate development and the initial resource consent applications that will be lodged with the local Councils. APL now seek approval via the Fast-Track process. As a group, the TWGG acknowledge that APL and their agents are accommodating iwi and mana whenua concerns in the following areas:

1. Earthworks

The TWGG shared concerns to APL and sought:

- Measures and practices to protect water-bodies from erosion and sediment and any contaminants, and
- The protection and preservation of taonga, cultural/customary practices, and sites and activities of significance to Mana Whenua.

TWGG are of the view that the information and content in the fast-track application demonstrates that these concerns are addressed as well as providing mana whenua the ability to monitor the earthworks activities on the site.

2. Establishing Foam Factory and Rail Siding

The TWGG shared concerns to APL and sought the following:

- Measures and practices to protect water-bodies from erosion and sediment and any contaminants,
- Protect and preserve taonga, cultural/customary practices, and sites and activities of significance to Mana Whenua,
- The planting indigenous vegetation, and if possible, locally sourced,
- By incorporating in the design, the inclusion of an area of land/wetland (e.g constructed wetlands) towards the restoration of taonga,
- The prevention and/or mitigation of potential contaminants in run-off water from impervious surfaces (paved areas), reaching open water bodies (drains, streams etc)
- The recognition and enhancement of the relationship between Waikato-Tainui and the Waikato River, its flood plains, and the shallow riverine lakes,
- Protection of water-bodies (river, lakes, wetlands, streams/tributaries), from the negative impacts of land use,
- Continued, and/or enhanced, access to traditional areas for customary and cultural activities,
- Consider beneficial re-use and on-site management of stormwater and wastewater,
- With air/airspace, Mana Whenua would like to avoid any new discharges to air that compromises human health and amenity values enjoyed by Mana Whenua, and
- Environmental enhancement actions/activities pertaining to restoring mauri of taonga (land, water, lakes, sites of significance, and wetlands).

TWGG are of the view that the information and content in the fast-track application for establishing and operating the proposed Foam Factory in Ohinewai demonstrates that these concerns are addressed, specifically;

- Stormwater management - TWGG support the methodology of onsite management of stormwater via roof top collection and detention ponds and constructed wetland,
- Wastewater management - TWGG support the methodology of an onsite wastewater plant and disposal field, and the provision for TWGG to view and provide feedback on the details of the wastewater treatment plant,
- Water supply - TWGG support the methodology of water capture and storage via primary use of water tanks and acknowledge the second supply via on-site bore supply, and
- Air discharge - The installation of carbon filter and discharge stack, and the provision for TWGG to monitor the performance of the carbon filter and stormwater management measures.

The TWGG believe we are able to address any actual and potential cultural and environmental impacts associated with the proposed earthworks, foam factory and rail siding activities in partnership with APL. Accordingly, should the Ministry for the Environment determine to accept this proposal for Referral, **the TWGG do not believe a cultural impact assessment report is necessary from tangata/mana whenua.**

However, members within the TWGG reserve the right to participate in the secondary processes of the expert consenting panel decision making to ensure they represent the concerns/views of their members/beneficiaries appropriately should any new information be presented.

We trust this letter finds you well, and we look forward to the ongoing engagement.

Ngā mihi

Glen Tupuhi

Chairperson

Tangata Whenua Governance Group

OFFICE OF THE MAYOR
Allan Sanson

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Ngaruawahia
New Zealand
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14 April 2020

To whom it may concern

I have been asked by an applicant to provide a letter in support of its application to the Crown infrastructure Partner Ltd's "Shovel Ready" fund in respect of a proposal at Ohinewai. The purpose of this letter is to provide support to the application and provide some context of the importance of Ohinewai for the Waikato district and greater Waikato region.

You will be aware of a number of processes underway currently which has implications for the future development of Ohinewai. These are the Hamilton to Auckland Corridor Plan, the Waikato District Growth and Economic Development Strategy (Waikato 2070) and the Waikato District Plan Review.

Consideration of Ohinewai as a future industrial node has featured very strongly in all these initiatives. Whilst I cannot pre-empt or prejudice the statutory (Resource Management Act) processes guiding the District Plan Review or any consenting processes underway, the Waikato 2070 hearings committee recommended Ohinewai as a future industrial node. We are expecting Council to consider the Waikato 2070 hearing committee decisions by mid-year (assuming a normal resumption of council business once the Covid-19 lockdown is over). You will also be aware that the independent hearings for a change in zoning for Ohinewai is scheduled for September.

Acknowledging that Council is yet to meet to adopt Waikato 2070, you will already be aware of my own personal support for the development of Ohinewai into a mixed use industrial and residential area north of Huntly. Being traversed by both the North Island Main Trunk line and the Waikato Expressway makes Ohinewai a prime industrial and residential location.

I also see rail as a key factor in realising more affordable freight cost and facilitating more efficient distribution of manufactured goods in the upper North Island and linking to overseas markets. With this in mind I am fully in support of a rail siding being constructed to service industrial activity at Ohinewai. I am also aware that KiwiRail has confirmed that a rail siding is practical. Whilst the construction of the rail siding is dependent on a decision pertaining to industrial zoning being made through the District Plan Review I support consideration being given by Crown Infrastructure Partners (CIP) for funding the construction of the siding in the interim. The construction of the siding will be the stimulus that Ohinewai needs for its proposed development and to support the country's wider economic recovery.

Yours sincerely

Allan M Sanson
MAYOR

ABODO

Carefully Crafted Timber

April 6, 2020

To Whom it May Concern

Rail Siding and Container Loading Facility at Ohinewai

Dear Sir / Madam

With reference to the latest government initiative to identify "Shovel Ready" infrastructure projects, we write in support of the idea to build a rail siding at Ohinewai, North of Hamilton.

Abodo has recently acquired a facility in Ohinewai, beside the Lumber Corp and Max Birt facilities, to grow its wood processing capability. Currently Abodo freights by truck 26,500 cubic metres of timber from several wood processors in the Waikato to either our Auckland warehouse or directly for export through Tauranga or Auckland Ports.

Benefits for this project include the following:

1. Less road transport - a rail option would allow us to divert over 90% of our land transport volume to rail, saving 950 truck journeys per annum. Moving freight on rail benefits everyone - fewer trucks on the road means cleaner air, fewer greenhouse gas emissions, less congestion and fewer accidents.
2. Local employment – we would estimate 2 – 5 full time positions for staff at the new facility. This is in addition to the KiwiRail staff required to operate the rail siding and container loading facility.
3. Less handling and associated damage – Kiwi Rail already handle timber and associated forestry products. Ideally the container loading facility would be MAF compliment allowing our full container load freight volumes to go directly into the Port without the need for further unpacking and handling.

In short Abodo full supports this initiative and sees it as a valuable infrastructure addition for the Ohinewai and wider Waikato community.

Yours sincerely,

Daniel Gudsell
Sales Director

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Appendix E – Supporting Technical Memos (Various)

PROPERTY ECONOMICS

SLEEPYHEAD FACTORY & RAIL SIDING OHINEWAI

FAST-TRACK REFERRAL

ECONOMIC EFFECTS MEMO

Client: Ambury Property Limited

Project No: 51919

Date: August 2020

W: www.propertyeconomics.co.nz E: s 9(2)(a) P: s 9(2)(a) PO: Box 331640, Takapuna 0740

SCHEDULE

Code	Date	Information / Comments	Project Leader
51919.3	August 2020	Report	Tim Heath / Phil Osborne

DISCLAIMER

This document has been completed, and services rendered at the request of, and for the purposes of Ambury Property Limited only.

Property Economics has taken every care to ensure the correctness and reliability of all the information, forecasts and opinions contained in this report. All data utilised in this report has been obtained by what Property Economics consider to be credible sources, and Property Economics has no reason to doubt its accuracy. Property Economics shall not be liable for any adverse consequences of the client's decisions made in reliance of any report by Property Economics. It is the responsibility of all parties acting on information contained in this report to make their own enquiries to verify correctness.

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1. OHINEWAI STAGE 1 & 2 ECONOMIC IMPACTS ASSESSMENT

Outline

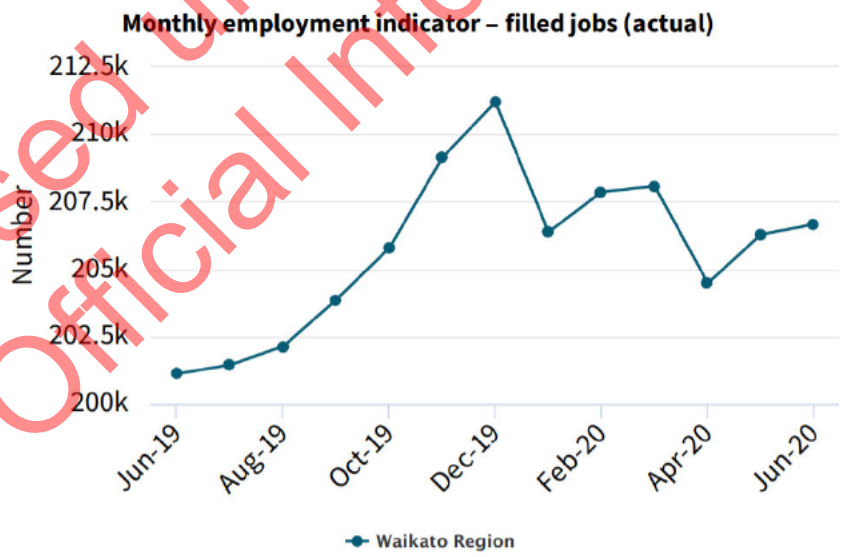
This economic assessment relates to Stages 1 and 2 of the Sleepyhead Factory which forms part of the APL Ohinewai Structure Plan. This involves the development of the first 23,000sqm of the proposed 100,000sqm Sleepyhead factory as well as the associated rail siding required to support the operation of the Sleepyhead facilities on site.

The following assessment outlines the expected impacts on the regional economy resulting from the development and operation of the proposed Sleepyhead factory (Stages 1 and 2).

This assessment should be considered in relation to the potential regional economic impact of the Covid-19 pandemic on the level of economic activity both short and medium term.

Figure 1 illustrates the more recent levels of economic activity within the Waikato Region in terms of employment. It indicates that employment growth within Waikato has shown strong growth over the year ended to 2019, more recently however this measure has dropped by over 5,000 jobs with the more recent 'rebound' potential impacted further by the more recent lockdown.

FIGURE 1: WAIKATO REGIONAL EMPLOYMENT CHANGE



Importantly both Manufacturing and Construction employment represented a greater proportion of Regional employment than at a national level. These two sectors have shown consistent growth over the past decade and are increasingly critical to the economic wellbeing of the region.

The following summarises the expected economic impact of Stages 1 and 2 of the Ohinewai Structure Plan in terms of both the development and operational phases of the proposal expressed in relation to Regional GDP and employment.

Economic Investment

Table 1 outlines the proposed level of capital investment over the following 4 years including both the Sleepyhead factory development and the essential rail siding. This shows a total investment of s 9(2) b) i) from 2021 with the development complete and operational by 2023.

TABLE 1: TOTAL OHINEWAI (STAGE 1 & 2) CAPITAL INVESTMENT

($m)	2020	2021	2022	2023
Earthworks and Civil		s 9(2)(b)(ii)		
Sleepyhead factory				
Railsiding and Civil				
Total Investment				

Economic Impact – GDP / Employment

Table 2 summarises the expected total economic impact of the development and operation of Stages 1 and 2 of the Sleepyhead operation and rail siding at Ohinewai over a 5-year period. It shows a total injection into the Regional economy of s 9(2)(b)(ii) to 2025 along with a total 5-year employee count equivalent of approximately 2,100 jobs.

TABLE 2: TOTAL OHINEWAI STAGE 1 & 2 REGIONAL ECONOMIC IMPACT

($m)	2021	2022	2023	2024	2025	Total
CAPEX	s 9(2)(b)(ii)					
OPEX (plus Household Income)						
Total Impact						
Total Employment	234	652	814	216	202	2,106

Additional Potential Economic Benefits

While the economic contribution of this project is in itself significant, there are other potential economic benefits to the Waikato Regional economy likely to result from this project including:

1. Opportunity and Equity: The development of proposed Stage 1 & 2 Sleepyhead factory and associated facilities has the potential to increase the competitive profile of both the Regional and local economy providing opportunity for employment growth and retention within and between the local economies.

The opportunity to retain employment is vital for the economic well-being of the Region's economies. This in turn is likely to increase population growth and provide greater economies of scale and productivity.

2. Operational Efficiencies and Increased Competitiveness: Along with increasing labour productivities, the development of additional employment is likely to improve overall business efficiencies increasing the competitive environment for the region. In addition, one of the purposes of the project is to improve the productivity and economic efficiency of the Sleepyhead manufacturing business which is currently constrained by its outdated facilities in Auckland.

   The development of accessible and competitive industrial opportunities around a rail siding provides increased efficiencies and competitive opportunities for the Region and local economy.

3. Sector Specific Growth: It is clear from the Region's changing economy that the predominance of agricultural activities has been significantly reduced over the past decade. This development facilitates a change to both secondary and tertiary business sectors through both a competitive location and the introduction of unique manufacturing activities to support employment and business growth.

4. Initial Stages of Larger Development: These initial stages form the critical first part of the much larger Ohinewai Structure Plan (OSP) development which includes the full 100,000m2 Sleepyhead factory within an industrial estate of 56ha. They have the potential to act as a catalyst for other development within the OSP and provide a signal to the wider regional (and national) economy regarding the willingness of the market to accept risk post-Covid.

Overall, the project represents a significant opportunity for the Regional and local economies to protect, sustain and grow jobs and income, provide additional job opportunities and income, while also providing additional competitive industrial opportunities for the medium to long-term recovery. These benefits exist within a timeframe that is likely to see significant uncertainty in development opportunities and a lower appetite for risk, impacting on both the construction and productive base of the Regional economy.

Memorandum

Date: 31 August 2020

To: Stuart Penfold, BBO

From: Robert Quigley, Director, Quigley and Watts Ltd

Subject: Social and cultural wellbeing for fast track application

Background: What is social and cultural wellbeing

Ambury Properties Limited (APL) seek approval for the Sleepyhead Ohinewai Foam Factory and Rail Siding via the Covid-19 Recovery Fast Track consenting process. This memorandum has been prepared to support the application for referral of the project to an Expert Consenting Panel via the Minister of the Environment.

The application seeks an assessment of the *'project's effects on the social and cultural wellbeing of current and future generations.'* To answer that, it is first important to understand what social and cultural wellbeing outcomes are and what drives them.

New Zealand has a long history of assessing wellbeing (in impact assessments), measuring wellbeing (e.g. Treasury's Living Standards Framework) and reporting wellbeing outcomes (e.g. BNZ's Wellbeing Index, or Statistics NZ's Wellbeing reporting). Such approaches were further supported by The Local Government (Community Well-being) Amendment Act 2019 and the 2019 Wellbeing budget.

The most common definition of wellbeing in New Zealand includes four domains (groupings or sets):

i. **Social** - individuals, their families, whanau, hapu, iwi, and a range of communities being able to set goals and achieve them, such as education, health, the strength of community networks, financial and personal security, equity of opportunity, and rights and freedoms
ii. **Economic** - whether the economy can generate the employment and wealth necessary to provide many of the requirements that make for social well-being, such as health, financial security, and equity of opportunity.
iii. **Cultural** - considers the shared beliefs, values, customs, behaviours and identities reflected through language, stories, visual and performing arts, ceremonies and heritage that make up our communities.
iv. **Environment** - whether the natural environment can sustainably support the activities that constitute healthy community life, such as air quality, fresh water, uncontaminated land, and control of pollution (SOLGM, 2020).

However, assessment does not start with a checklist of potential domains or impacts but must identify the potential social and cultural impacts from an awareness of the project and an understanding of how the project might affect what is important to the project's stakeholders (IAIA, 2015). Fortunately, data is available on the masterplan, on the local communities of Te Kauwhata,

Huntly and Ohinewai. As such, the determinants of social and cultural wellbeing which are the most likely, and most substantial, to be affected by the proposal are discussed below:

A. Employment

Employment and consequent income are the two largest determinants of a person's (and their household's) health and wellbeing (Canadian Institute of Advanced Research, 2002). Nothing else affects wellbeing like a job can, as clearly articulated by The World Bank Development Report (2013):

> *"Jobs are transformational. They are more than just the earnings and benefits they provide. They are also the output they generate, and part of who we are and how we interact with others in society. Jobs boost living standards, raise productivity and foster social cohesion"*

Therefore, any consideration of effect on social and cultural wellbeing from this project must start with employment.

Employment projected from factory construction is substantial, with a five-year construction employee count of over 2,100. While such jobs are temporary, they support the pipeline of work which exists in the construction industry.

Operationally and longer term, the factory is projected to create 15 jobs in stage one and 35 jobs in stage two (total of 50 long term permanent jobs). Ohinewai already has approximately 200 existing jobs, but just 152 residents. In contrast, Te Kauwhata has a population ten times the size but only about 400 jobs (many of which are in teaching and residential care). While there will likely be some transfer of employees from Auckland and fifty additional jobs is a modest number to begin with, it continues to position Ohinewai as place of work (greatly outstripping its population). The proposal brings additional scale and value, and will further support Ohinewai as a place to work for another fifty families.

Also, Stages one and two of the Sleepyhead Factory are a catalyst to a larger goal. The New Zealand Comfort Group (parent entity of APL) are proposing to change the zoning for the surrounding land (178ha) and seek resource consent for additional factory stages, as well as other industrial units and a residential zone. Once the Comfort Group have left their constrained Auckland manufacturing site the company will expand its operations. Together with other employers, the number of employees is projected to increase to 2,072 at the site. The total number of operational positions created by development in accordance with the Masterplan is projected to be approximately 2,600.

To encourage local employment, the Comfort Group is working alongside Waikato-Tainui and Wintec. Eight local Maori already have permanent positions and are commuting (in a van) to the Auckland factory each day. They are the first wave of a local workforce for the fifty to be employed at the factory.

Also initiated by the Comfort Group is a School of Secondary Tertiary Studies. Students for whom school is not working instead get to attend a vocation-based learning institute. The long-term prospects for them and their families can be transformative. Local schools and their students also benefit as the children who are usually somewhat disruptive are no longer able to disrupt the learning of others. This school of tertiary studies will not just benefit The Comfort Group, but also other large employers in the area, such as Max Birt Sawmills and Cobb Vantress (chicken hatchery) who are also engaging in the partnership to set up the school.

These positive effects are highly likely to be inter-generational because of the nature of outcomes arising from employment, the targeting of school students and the strong relationship with local Maori.

Overall, the potential social and cultural effects of employment on each township's existing labour pool, students and local Maori within Ohinewai, Te Kauwhata and Huntly are positive and substantial. Social and cultural effects are experienced at an individual level, at the level of the individual's family including children, and at the school and community level. At the individual and family level, employment contributes to outcomes such as living standards, health and wellbeing, mental health, social connection, personal identity and life satisfaction. It gives people a reason to get up each morning and provides structure to their lives. At the family and community level, employment contributes money and resources, social capital and social cohesion, and contributes more broadly to achieving societal goals[1].

The proposed rail siding also has the potential to underpin future employment. Such a facility dictates a newly available destination for a rail mode of travel, thereby enabling different types of freight to be sent and received in the area. Rail is best at transporting bulk freight/cargo, where double handling is avoided and the volumes/tonnages are large (Bolland Report, 2010). Rail customers pay per shipping container (volume), not weight and volume as per trucking. Furthermore, when bulk cargo is transported direct to a destination (say a port), double handling is avoided.

For businesses who need to receive or send large-volume freight , Ohinewai could become a potential site for their establishment. The rail siding creates the destination to enable further business investment, thereby driving economic, social and cultural wellbeing.

Container handling jobs (packing in and out from the rail siding) can be matched to local people as the necessary skills can be quickly taught, if the skills are not already present.

B. Relationships

Since inception, Craig Turner from The Comfort Group has described his desire to create inter-generational change. This strongly resonates with hapu and iwi. Together, with other government agencies, the key stakeholders have developed formal and informal relationships built on trust and respect. Such relationships are hard won over many years, and unlike transactional/contract-based 'deals', true collaborative relationships have the potential to deliver lasting processes and benefits to all involved. From a social research perspective, such high-quality relationships are rare, but local Maori leaders describe that such relationships exist with this project. Such relationships strongly support social and cultural outcomes, including achieving equity.

C. Aspirations

Local employment and the rail siding (as a destination) provides additional assurance to hapu and iwi regarding their proposed Papakainga. Up to 50 houses are planned near Matahuru Marae. Even short-term employment, for a decade or so, is long enough to mean that people can pay off their houses. Local Maori leaders describe how secure housing has the potential to flow into multiple positive social and cultural outcomes for individuals, whanau and their communities e.g. healthy housing; the financial ability to fully engage in education, sport, entertainment etc; as leverage for other investments; greater access to social networks; etc. Iwi and hapu do not want to rely on housing provided by others (which, sooner or later, is withdrawn) and instead want greater control

[1] Quigley and Watts Ltd (2014). Social value of a job. Wellington: MPI.

over housing. Maori leaders describe how this project strongly supports their Papakainga aspirations.

Waikato Tainui have a strong history of a vibrant export economy, secure housing and a treasured environment. Colonisation and its affects undermined these achievements but this project has a chance to support iwi aspirations. Local leaders are strongly supportive of the relationship developed with The Comfort Group, the inter-generational aspirations of all involved and the consequent work (in partnership) that is occurring. It is more than just talk and these high quality relationships have the potential to underpin social and cultural wellbeing outcomes.

For Lumsden Road residents (western side of road), these residents will experience social effects arising from the change of their rural outlook (to the east only) to massed plantings. For the wider community of Ohinewai, there are several medium and large employers (and their factories) in the surrounding area already (Max Birt Sawmill, Lumbercorp, Ceracell, Compac Homes). The presence of another 50-staff business is in keeping with the existing environment.

D. Environment

The natural environment is a determinant of wellbeing, contributing up to 15 per cent of a person's (and their household's) health and wellbeing (Canadian Institute of Advanced Research, 2002). Determinants include air quality, fresh water, uncontaminated land and control of pollution.

For this project, APL have sought to enhance the existing environment via remediation of an area of historic site contamination, retiring a portion of the existing dairy farming operation and providing enhancement plantings surrounding stormwater wetlands. Neutral effects include no effect regarding access to Lake Rotokawau for hunting and fishing. APL have worked with the local property owners and tangata whenua groups to address effects of the development such as noise and vibration, traffic effects, monitoring of earthworks by kaitiaki and installing world class air quality filters at the factory. Wastewater and stormwater management will also provide for best practice treatment measures to ensure effects on the downstream Lake Rotokawau, Lake Rotokawau and Whangamarino wetland are negligible. Together these mitigate any potential environmental effects of the proposal. Therefore, in relation to environment, the potential effects on wellbeing are assessed to be neutral.

Robert Quigley

Director, Quigley and Watts Ltd
31 August 2020

Ecology New Zealand Limited
9F Beatrice Tinsley Crescent
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Auckland
Email: info@ecologynz.nz

MEMORANDUM

Attention: Ambury Properties Limited

CC David Gaze, Gaze Holdings Ltd./ Stuart Penfold, Bloxam, Burnett & Olliver

Date: 28 August 2020

From: Chad Croft/Stephanie Angove-Emery

Project: Ohinewai Sleepyhead Foam Factory & Rail Siding, 88 Lumsden Road
Covid-19 Recovery 'Fast-Track' Consenting

1. INTRODUCTION

This memorandum[1], prepared by Ecology New Zealand Limited ('ENZL') for Ambury Properties Ltd (APL, 'the client'), presents a high-level Ecological Impact Assessment ('EcIA') for the proposed Sleepyhead Foam Factory, rail siding, preparatory earthworks and associated haul road at 88 Lumsden Rd, Ōhinewai ('the site'). The EcIA is to support an application by APL to the Ministry for the Environment under the Covid-19 Recovery Fast Track consenting process.

This EcIA was prepared based on investigations already completed on-site for the wider- re-zoning process and for applications lodged with the location authorities under the traditional resource consent process. However, this report contains a level of detail to suit the Fast Track process, acknowledging that if the proposal is successful in being referred, then further investigations and reporting will be required to be submitted.

This EcIA aims to assess the actual and potential adverse effects associated with the proposed development on the site's ecological values at a high level.

The scope of this report comprises the following:

- A description of the terrestrial and aquatic ecological values;
- An assessment of effects on terrestrial and aquatic ecological values; and
- Recommendations to avoid, remedy, mitigate and/or offset adverse ecological effects.

[1] This memorandum is subject to the Report Limitations provided in Appendix A.

Proposed Activity

The project proposes to develop the site with bulk earthworks, geotechnical remediation, the construction of the Sleepyhead Foam Factory and associated rail siding, including stormwater management wetlands, loading, unloading and parking facilities. In addition, a temporary haul road to enable heavy vehicles for the earthworks fill activity to access the site from Tahuna Road is proposed to be constructed.

Earthworks are scheduled to commence in the coming earthworks season of 2020/2021. This will require the removal of vegetation, primarily comprising of exotic trees and pasture grass, as well as the installation of up to four culverts, and realigning portions of five farm drains within the proposed works footprint. The following assessment is based on communications with the client's project team, and earthworks and site plans provided by BBO and Woods dated 17/08/2020.

1.1. Site Location, Description and Ecological Context

The site is located at 88 Lumsden Road, Ōhinewai, Waikato and is situated within the Meremere Ecological District of the Waikato Ecological Region. The site location is outlined in Figure 1 below.

The proposed earthworks area covers 27.4. ha and the associated haul road covers an additional 1.1 ha, totalling to 28.5ha. Landcover across the site, including the proposed earthworks site and along the proposed haul road is comprised predominantly of pasture grasses and exotic trees with multiple farm drainage channels traversing both the site and associated haul road alignment. No natural watercourses are shown within the site on the Water Classification layer of Waikato Regional Council's (WRC) WaikatoMaps[2].

Within the wider landscape context, the site lies within a rural area, bordered by agricultural land on all sides, with the North Island Main Trunk Railway (NIMT), State Highway 1, and the Waikato River to the west. The site contains no Significant Natural Areas (SNA) as classified by WRC, with the nearest SNA just over a kilometre to the south, surrounding Lake Ōhinewai, and at Lake Rotokawau approximately 1.5km to the east. WRC's Vegetation Biodiversity Map[3] (Land Cover layer) shows the entirety of the site as 'High-Producing Exotic Grassland'.

Figure 1 Site context map.

2. METHODOLOGY

2.1. Desktop Assessment

Prior to commencement of site assessments, a desktop investigation was undertaken, querying relevant databases for information relating to the site's ecological characteristics. Databases queried included:

- Department of Conservation Herpetofauna database (2020 and prior)
- Department of Conservation Bat database (2020 and prior)
- Ebird.org (2019 and prior)
- NIWA Freshwater Fish Database (2020 and prior)
- WaikatoMaps Drainage Layer
- WaikatoMaps Vegetation Biodiversity Layer

2.2. On-site Investigations

On-site investigations have been completed at various times between July 2019 and March 2020 and included visual assessments of vegetation and the documentation of fauna habitat and communities. Specifically, the following assessments were undertaken:

- Vegetation classification

- General habitat assessments for lizards and birds
- Five-minute bird counts
- Targeted manual habitat searches for native lizards
- Bat tree risk rating- trees were risk-rated as potential bat roosting habitat on a conservative basis, following the NZTA risk guidelines[2] which have become established as industry-standard practice
- Bio-acoustic bat survey
- Watercourse mapping-all watercourses within the site were walked and photographed with general physical parameters assessed.
- Fish survey across the farm drainage channels throughout the site using both fyke nets and gee-minnow traps, which included a targeted mudfish survey.

3. ECOLOGICAL VALUES ASSESSMENT

3.1. Vegetation

Overall, the vegetation within the proposed footprint area and along the proposed haul road alignment was of low quality with little diversity. It was dominated by pasture grass with few scattered exotic trees, and three hedgerows. Mature exotic trees within the proposed earthworks and haul road areas consisted of tortured willow (*Salix matsudana*), sweet chestnut (*Castanea sativa*), London plane (*Platanus x acerifolia*) and liquidambar (*Liquidambar styraciflua*); the hedgerows comprised of Japanese cedar (*Cryptomeria japonica*) and Radiata Pine (*Pinus radiata*).

Vegetation communities associated with lower lying areas and those adjacent to drainage channels were characterised by juncus (*Juncus* spp.), carex (*Carex geminata*), willow weed (*Persicaria maculosa*) and patches of ferns (*Blechnum novae-zelandiae* and *Paesia scaberula*).

3.2. Terrestrial Fauna

The site provided foraging habitat, primarily for common native and exotic avian species that have adapted to open agricultural landscape areas. Limited arboreal nesting habitat was identified within the exotic trees on site. No threatened or at risk birds were observed on-site during the site investigations.

Suitable habitat for ground-dwelling lizards was minimal on site and mainly comprised of grazed grassland with inorganic farm debris such as corrugated iron sheets next to existing structures. There were small amounts of dense or clumped vegetation along the drainage channels and a few scattered logs were present. No suitable habitat for arboreal lizard species was observed within the proposed earthworks area or along the proposed haul road alignment. No threatened or at-risk lizards were observed on-site.

The acoustic bat survey identified low amounts of long-tailed bat (*Chalinolobus tuberculatus;* Threatened – Nationally Critical[3]) activity within the site. Potential long-tailed bat habitat

[2] Smith, D., Borkin, K., Jones, C., Lindberg, A., Davies, F., & Eccles, G. (2017). *Effects of land transport activities on New Zealand's endemic bat populations: reviews of ecological and regulatory literature* (No. 623).
[3] O'Donnell, C.F.J.; Borkin, K.M.; Christie, J.E.; Lloyd, B.; Parsons, S.; Hitchmough, R.A. 2018: Conservation status of New Zealand bats, 2017. New Zealand Threat Classification Series 21. Department of Conservation, Wellington. 4 p.

features on-site including roosting, foraging, and commuting habitat were noted across the Stage 1 earthworks area and along the proposed haul road alignment.

The overall values for both lizard and birds have been assessed as low. The bat values on-site are considered to be very high as they are a Nationally Threatened species.

3.3. Freshwater Ecology

A total of five watercourses (drainage channels) were present within the site and the proposed haul road alignment crosses three additional existing farm drains (Figure 2). Only the drain along the eastern boundary outside of the works footprint is marked on Waikato Regional Council's online mapping system. All drains appeared to be historically artificially created. Based on the Waikato Regional Plan watercourse definitions, all drains are defined as artificial watercourses (farm drainage canals).

The drains were soft-bottomed and contained stagnant water throughout with no flow at the time of assessment. They were predominantly straightened channels and exhibited little variation in channel morphology. Severe cattle pugging and organic surface oils were observed in parts of the drains. Hydrologic heterogeneity was negligible with pools and sitting water present and no runs or riffles. "Instream" refuge habitat was limited to small deep pools and vegetation within the wetted areas. Shading was high in some of the drainage canals due to dense vegetative growth within the channel as well as bank incision and culverts. There was no anaerobic sediment visible and no sediment bubbling or odour upon sediment disturbance noted.

The fish survey resulted in trapping several shortfin eels (*Anguilla australis*). Black mudfish (*Neochanna diversus*) have previously been recorded in the wider Lake Waikare catchment. However, mudfish were not observed or captured during the targeted mudfish survey, and it is considered that mudfish presence was limited by poor connectivity. If mudfish were present, within any of the drains surveyed, they were at levels undetectable during the targeted survey effort. Overall, the freshwater values on-site were considered low.

ECOLOGY NEW ZEALAND

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Sources: Sate ite imagery sourced from ESRI; Earthworks Extent sourced from design by Woods (DWG No:P19-138-RS-010-GE, dated 17/08/2020). Hau Road footprint sourced from design by Woods (DWG No: P19-138-RS-185-EW, dated 17/08/2020).

Ohinewai Sleepyhead Foam Factory & Rail Siding

Figure 2: Drainage Channels

Date: 27 August 2020| Revision : 1

P an prepared for Ambury Properties Limited by Eco ogy New Zea and Limited
Author: SAE

4. ASSESSMENT OF ECOLOGICAL EFFECTS

Based on the values identified in Section 3, the permanent removal of vegetation and the infilling and realignment of the drains within the proposed footprint will result in a moderate level of effect due to both actual and potential effects as described below:

Actual Effects

- Permanent loss and fragmentation of habitat for threatened fauna
- Permanent loss of vegetation
- Permanent loss of aquatic habitat
- Increased noise and lighting during construction and operational phases and post-construction due to new factory and railway spur
- Temporary increase of sediment entering the remaining watercourses

Potential Effects

- Potential injury/death of native fauna, particularly native birds and bats inhabiting the exotic trees on site and native fish species within the drains to be diverted
- Potential increase in contaminants entering wider catchment due to stormwater runoff from factory and railway spur

5. MANAGEMENT OF ECOLOGICAL EFFECTS

The following ecological management recommendations should be implemented to ensure that any foreseeable actual and potential ecological effects associated with the proposed development are adequately managed and mitigated. It is expected that implementation of the following recommendations will ensure the **overall level of effect on the ecological values identified will be low.**

- **Ecological Management Plan (EMP)** – A site specific EMP should be prepared for the site which aims to mitigate and manage foreseeable ecological impacts associated with the removal of protected vegetation and enhance retained areas of indigenous biodiversity. This EMP should be approved by Waikato Regional Council for implementation and cover the following:
    - **Fish Management Plan** – The risk to native fish species should be managed by the implementation of a site-specific fish management plan. This plan should be prepared by a suitably qualified and experienced ecologist and should cover suitable salvage methods tailored for the site. It should include consideration to potential species within the on-site waterways and methodologies for the salvage, temporary storage and relocation of any fish caught and released into appropriate habitat within the same catchment.
    - **Lizard Management Plan** – This plan should be prepared by a Department of Conservation recognised herpetologist and implemented across the works area to ensure native lizards are appropriately managed and, where appropriate, relocated into retained protected vegetation of equal or greater quality on-site. Lizard management should be undertaken before and during vegetation removal by an appropriately qualified and experienced ecologist.
    - **Bird Management Plan** – Vegetation removal should take place outside of the peak bird breeding season (October to January inclusive). If vegetation clearance cannot be achieved outside of these dates, then those areas should be checked by an appropriately qualified ecologist for nesting birds immediately prior to

vegetation removal. If active nests are detected, vegetation removal should be put on hold until the area is deemed by an appropriately qualified ecologist to be clear of nesting birds.

- **Bat Management Plan** – A bat management plan should be prepared by a Department of Conservation-recognised bat ecologist. Industry-standard vegetation removal protocols should be outlined in this plan. The management plan should also address mitigation measures for the loss of potential bat roost trees and light and noise effects.

- **Wetland Treatment areas** – Stormwater runoff from the factory and railway siding will be treated in the wetland areas proposed to be created along the north-western and eastern boundaries of the footprint (Stormwater Layout plans designed by Woods, DWG No P19-138-RS-300-DR, dated 17/08/2020).

- **Sediment and erosion** - To mitigate the risk of sediment entering adjacent drains and contaminating the Lake Waikare catchment, a sediment and erosion control plan should be prepared in accordance with Waikato Regional Council's Erosion and Sediment Control guidelines (Report: TR 2009/02, updated 2014). This plan should be submitted to Waikato Regional Council for approval prior to commencement of works.

6. CONCLUSION

This report provides a high-level ecological impact assessment for APL's proposed factory and rail siding development at 88 Lumsden Road, Ōhinewai. While the risk of actual and potentially significant adverse ecological effects is considered moderate, appropriate ecological management measures have been recommended to avoid and mitigate those effects. Implementation of the recommended ecological management measures will decrease the risk of potential adverse effects on identified high value ecological features, resulting in an overall low level of ecological effect for the project.

It is understood that additional investigation and reporting is likely to be required if the project is successful in being referred to an expert consenting panel; however, it is considered that this assessment provides the appropriate level of information to facilitate consideration of the proposal under the first stage of the Covid-19 Recovery Fast Track consenting process.

APPENDIX A

Report Limitations

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ii) The scope and the period of ENZL's services are as described in ENZL's proposal and are subject to restrictions and limitations. ENZL did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Report/Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by ENZL in regards to it.

iii) Conditions may exist which were undetectable given the limited nature of the enquiry ENZL was retained to undertake with respect to the site. Variations in conditions may occur between investigatory locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Report/Document. Accordingly, if information in addition to that contained in this report is sought, additional studies and actions may be required.

iv) The passage of time affects the information and assessment provided in this Report/Document. ENZL's opinions are based upon information that existed at the time of the production of the Report/Document. The Services provided allowed ENZL to form no more than an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

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vi) Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by ENZL for incomplete or inaccurate data supplied by others.

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ix) Where lengths or other measurements have not been provided by a surveyor, ENZL has used basic GIS mapping and measurement systems to estimate these numbers. These should not be taken as surveyor-level accuracy for the purposes of decision making.

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Memo

To	David Gaze
CC	Stuart Penfold; John Olliver
From	Cameron Inder
Date	28 August 2020
Job No.	14580.17
Job name	Foam Factory Fast Track
Subject	**Sleepyhead Foam Factory & Rail Siding, Ohinewai** **Traffic Effects Memo for Covid-19 Fast Track Referral Application**

1. Introduction

This memo provides a broad assessment of the transport related effects of the proposed Sleepyhead Foam Factory and Rail Siding, located at Ohinewai. This memo supports an application by Ambury Properties Limited (APL) to the Minister for the Environment under the Covid-19 Fast-Track consenting legislation (fast-track process).

The Foam Factory comprises Stages 1 and 2 of the proposed large-scale NZ Comfort Group (NZCG) manufacturing facility, located on land on the corner of Lumsden Road and Balemi Road, Ohinewai. As part of the proposal, a rail-siding will provide access to the foam factory (and future stages of the wider development) to the North Island Main Trunk Railway (NIMT) via a new spur line. The site has excellent access to State Highway 1 (Waikato Expressway) via the full diamond Ohinewai Interchange.

This memo summarises the key aspects of a Traffic Impact Assessment (TIA) report (dated 6 August 2020) that was completed for Stages 1 and 2 Foam Factory, that is subject to a separate resource consent application to the local authorities (not including the rail siding). This memo also includes a summary of the potential effects of advancing the rail siding as part of the application.

2. Foam Factory, Rail Siding and Earthworks Overview

Appendix A to this memo illustrates the concept layout of Stages 1 and 2 of the Foam Factory, the Rail Riding and the realignment of Lumsden Road.

The following subsections outline further details of the various components.

2.1 Foam Factory

2.1.1 Overview - Foam Factory Proposal

The factory, which has a total combined gross floor area (GFA) of approximately 23,710 m^2, will comprise a foam manufacturing plant, a foam underlay plant, storage for materials, and associated installation of water

supply, wastewater and storm water infrastructure. The factory is expected to employ approximately 15 full time staff for Stage 1 and a total of 50 full time workers when Stage 2 is operational.

2.1.2 Traffic Effects associated with the Foam Factory

The following summarises the operational transport effects of the Stages 1 and 2 Foam factory:

- The combined trip generation is expected to be approximately 190 vehicle movements per day, with 20 vehicle movements occurring during the traditional road network peak hours. Heavy commercial vehicles (HCV) are estimated to be in the range of 25% to 35% of the total daily trip generation; i.e. typically, 50 to 70 HCV movements per day.
- Vehicle access to the factory is proposed from Lumsden Road from an existing farm access at 88 Lumsden Road. The existing access layout is currently formed as per the access formation standards for private accesses in rural zones. The existing layout will, however, not be adequate for accommodating two-way traffic or heavy commercial movements associated with Stages 1 & 2 of the factory.
- A total of 52 parking spaces, including two accessible car parks and a separate bicycle parking area with provision for ten bicycles, are provided within the Stage 1 & 2 factory site. It is anticipated that the parking provided within the factory site will be sufficient to meet the expected operational requirements of Stages 1 & 2 of the factory.

Overall, the transport related effects of the Stage 1 and 2 Foam Factory operation will be negligible to minor from a traffic management and safety perspective, provided that the specific mitigation measures are implemented as follows:

1. The proposed vehicle access to the factory will be upgraded to comply with the Waikato District Council standards for a heavy commercial vehicle access.
2. All visitor and site traffic will enter and exit the site at this access point. The access connects to an internal 6 m wide one-way ring road within the site that has a 30 km/h speed limit imposed.
3. The vehicle access and internal circulating road shall be designed so that the spatial needs of the appropriate design vehicle (18 m semi-trailer (NZTA RTS 18) and 19.45 m semi-trailer (HPMV)) are met.

2.2 Rail Siding & Lumsden Road Realignment

2.2.1 Overview - Rail Siding and Lumsden Road Realignment

The drawings in **Appendix B** illustrates the location and concept design of the proposed rail siding connecting to the NIMT, and the associated realignment of Lumsden Road to accommodate a KiwiRail compliant level crossing design.

The rail siding will be constructed together with the associated realignment of Lumsden Road and level crossing as one project, subject to KiwiRail and Waikato District Council engineering approvals and safety reviews. The red lines of the rail siding shown in the drawings provided in **Appendix B** represent the centreline of the tracks. This shows there will be one branch track from the NIMTR that splits into three tracks after the level crossing on Lumsden Road.

Balemi Road will also be widened, sealed and upgraded to an urbanised industrial road standard with kerb & channel provided on the southern side of the road.

APL has advised that the rail siding provides significant benefit to their operations via providing for direct import and export of materials and products transported via the NIMT to and from Auckland and Tauranga Ports. APL has estimated that approximately 50 heavy commercial vehicle movements per day will be replaced by operations via the rail siding.

The rail siding has also attracted interest from other manufacturing / industry businesses that operate in the vicinity of the site (Lumsden Road). Future use of the rail siding from other industrial activities that may establish as part of the wider development site is also expected.

This freight would otherwise travel by road between the site and the ports. Therefore, the rail siding provides the positive effect of removing HCV movements from the road network.

2.2.2 Traffic Effects associated with the Rail Siding

APL expect that the transport of materials and product by rail will be equivalent to approximately 25 HCV loads per day (50 truck movements to and from the site). Given that the assessment completed for the Factory (without the rail siding) predicted 50 to 70 HCV movements per day, the development of the rail siding results in no more than 20 HCV movements per day on the network when Stage 2 is complete and operating (a reduction of truck movements of approximately 70-100%).

The associated reduction in HCV trips will help to extend the life of the affected road pavements to and from the site, while also reducing the potential of safety conflicts arising on the wider transport network, including the Waikato Expressway and Ohinewai Interchange.

2.2.3 Traffic Effects of the Level Crossing on Lumsden Road

Key aspects of the level crossing design that support the safety of the level crossing include:

- Low traffic volumes on Lumsden Road (555 vpd, 16% HCV in 2019). A significant portion of all new traffic generated by the APL development, excluding a considerably small portion of trips that will require access to the rail siding from Balemi Road, will access the network south of the proposed level crossing, resulting in negligible volume increase at the crossing.
- Realigning Lumsden Road through a series of back to back curves so that the proposed rail siding crosses Lumsden Road at a safe angle (between 70 and 90 degrees) with low vehicle speeds.
- Speed Limit reduction on Lumsden Road from 100 km/h to a proposed 60 km/h, from Tahuna Road to 280m north of Balemi Road.
- Active speed reduction measures including a speed limit gated signs threshold treatment and perpendicular rumble strip markings on the northern approach.
- Street lighting, roadside barriers and chevron signs through the S bend curves.

An independent Road Safety Audit carried out on the concept design identified no 'Significant' or 'Serious' concerns with the concept design. The highest ranking safety issues identified were three 'Moderate' concerns; one involving sightline protection for traffic exiting Balemi Road, one relating to potential for trains on the NIMT railway line to activate the rail siding signals unintentionally thus causing vehicle drivers to distrust them, and the third related to a lack of street-lighting in the initial design. Four minor/comment issues were also identified. BBO agree with all of the recommendations and all of the issues have been addressed without significant changes to the design.

Accordingly, it is concluded that the rail siding level crossing will operate safely for road users if it is designed in accordance with the concept design and KiwiRail standards and approvals for level crossings on low volume roads.

2.3 Earthworks operation

2.3.1 Overview - Earthworks Operation

The construction of the factory and rail siding require earthworks over an area of approximately 27 ha and the importation of significant volumes of clean fill to provide for suitable building platforms and pre-loading of soft ground.

The bulk earthworks and ground remediations works will be carried out over three six-month earthworks periods and approximately 380,000m^3 (solid volume) of clean fill material will be imported to the site. This volume is the likely maximum volume of fill material that is expected to be imported to the site. The required material is proposed to be transported to the site utilising heavy truck and trailer units and via a proposed haul road accessed from Tahuna Road. Source material has not been confirmed however is likely from nearby quarries.

The haul road has been proposed by APL in order to avoid the transport of significant volumes of fill material via heavy vehicles past existing residential properties on Lumsden Road. General contractor vehicle access will still utilise the existing Lumsden Road access, however heavy vehicles will use the Haul Road.

It is proposed that imported material is delivered to site in three phases each consisting of approximately 20 weeks (i.e. three 20-week periods). The first phase will complete the structural fill and preload works within the Stage 1 factory area and the second phase will complete the remaining areas while Stage 1 is under preload. Phase 3 will complete the rail siding and wetland areas.

On average, approximately 252, 168, and 112 heavy vehicle movements (two-way movements) are expected to be generated per day during Phase 1, 2 and 3 respectively. These figures are based on a six-day working week (7am to 6pm, Monday to Saturday) and allows for programming and weather delays.

Depending on the final construction scheduling, wet weather and other matters, there may be days where the total heavy vehicle movements on the haul road peak at 300 movements per day while the following week due to weather only 100 movements will be generated per day.

This 300 movements per day is the proposed maximum daily total movements on Tahuna Road and the haul road, while the average will not exceed 200 movements per day (two-way movements) over two working weeks. BBO recommends that heavy vehicle movements on the haul road are managed to these limits as conditions of consent, by the earthworks contractor through the CTMP.

2.3.2 Traffic Effects associated with the Earthworks Operation

The following summarises the transport effects as a result of the earthworks operation:

- Based on the findings from the network capacity assessment, the additional earthworks traffic, when managed according to the average and maximum daily limits and with heavy vehicles being directed to site via the haul road, is not expected to have an impact the capacity of the local road network and surrounding intersections during the respective peak operating periods.
- The volume and frequency of heavy commercial vehicles on the Ohinewai Interchange ramps Tahuna Road, and Lumsden Road has the potential to increase on the risk of safety impacts on road users. To mitigate the potential safety effects, the following measures are proposed:

- The bulk filling operation of the earthworks needs to be carried out under a Construction Traffic Management Plan (CTMP) which outlines the traffic control activities, traffic impacts and mitigation measures. The CTMPwill be finalised and approved prior to works commencing.
- Temporary traffic management will be in place prior to and during the works. This will include the appropriate advance warning signage.
- Road widening on Tahuna Road to provide sufficient road space to allow through vehicles to safely pass slower left-turning trucks at the haul road access.
- Increasing the size of the Stop signs and advanced warning signs on the southbound off-ramp.
- Removing overgrown vegetation at the top of the southbound off-ramp to improve sightlines (looking both east and west).
- Installing temporary speed limits of 50 km/h on Tahuna Road and Lumsden Road from the interchange to the site accesses.
- Provision of an automated wheel wash facility shall be installed immediately before the sealed surface of the Tahuna Road access; all trucks departing the facility shall be required to wash their tyres to prevent the tracking of mud and debris on to Council Roads.

3. Conclusions

On this basis, our overall conclusion is that the proposed NZCG Foam Factory and rail siding, Lumsden Road level crossing and earthworks activities will result in negligible adverse effects on local traffic using Lumsden Road, the Ohinewai Interchange and State Highway 1.

The implementation of the rail siding and access to the NIMT will provide for a reduction of heavy vehicles from the transport network and will lead to positive transportation effects on the wider road network.

Yours sincerely,
Bloxam Burnett & Olliver

Cameron Inder
Transportation Engineering Manager
K:\145860 Ohinewai Development\17 Foam Factory Fast Track\Technical inputs\Traffic\Traffic Memo re Rail Siding Impact.docx

Appendix A – Preliminary Site Layout Plans

WOODS
EST.1970

BALEMI ROAD

PROPOSED SPRINKLER TANKS

PROPOSED RAINWATER TANK

FACTORY STAGE 1 EXTENT

RAIL SIDING

EARTHWORKS EXTENT

LONDON PLANE TREE TO BE RETAINED

SH1 / WAIKATO EXPRESSWAY SOUTHBOUND

SH1 / WAIKATO EXPRESSWAY NORTHBOUND

BUILDING 1

BUILDING 4

BUILDING 5

BUILDING 2

BUILDING 3

PROPOSED SITE SHED & FACILITIES

FACTORY STAGE 2 EXTENT

NORTH ISLAND MAIN TRUNK LINE (KIWIRAIL)

LUMSDEN ROAD

LEGEND

EXISTING CONTOURS

EARTHWORKS EXTENT

FACTORY EXTENTS

SCALEBAR (m) 0 25 50 125

SCALE | 1:2500 @A3 | 1:1250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	RH
1	ISSUED FOR FAST TRACK CONSENT	BP	17/08/2020	DESIGNED	BP
				DRAWN	BP
				CHECKED	BP
				APPROVED	

88 LUMSDEN ROAD
OHINEWAI

WOODS.CO.NZ

the comfort group

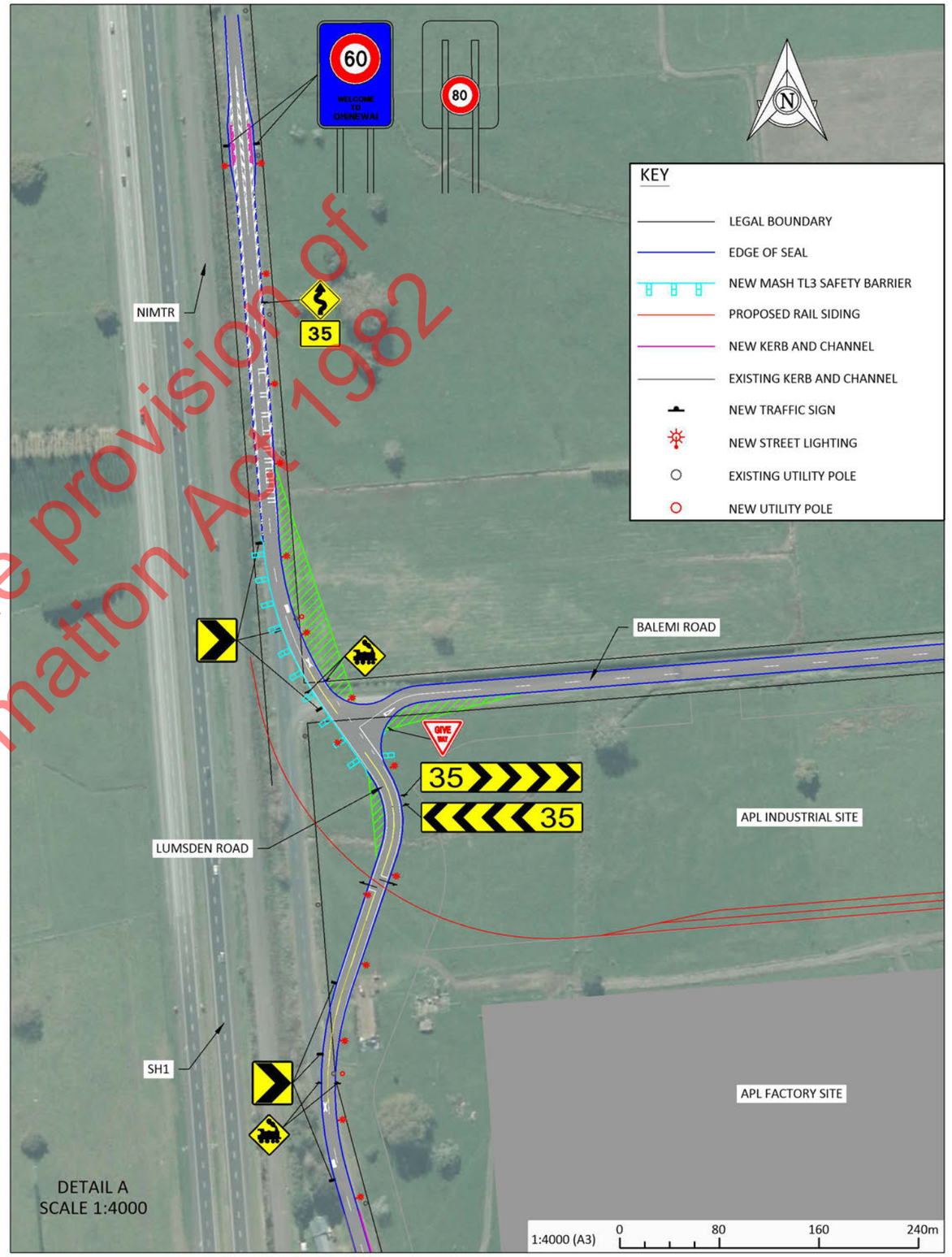
NZ COMFORT GROUP FACTORY

SLEEPYHEAD FACTORY STAGES 1 & 2 AND RAIL SIDING
FACTORY OVERLAY LAYOUT

N

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:2500 @ A3	1
COUNCIL	WAIKATO DISTRICT COUNCIL	
DWG NO	P19-138-RS-011-GE	

Appendix B –Lumsden Road Realignment Concept Design



B	08/05/2020	SAFETY AUDIT RESPONSE	SB	RB	CI	
A	01/04/2020	FOR INFORMATION	SB	RB	CI	
	DATE	ISSUE/REVISION DETAIL	BY	CHK	APPR	

DESIGNED: SB | CHECKED: RB
DRAWN: SB | APPROVED: CI
mx model version:

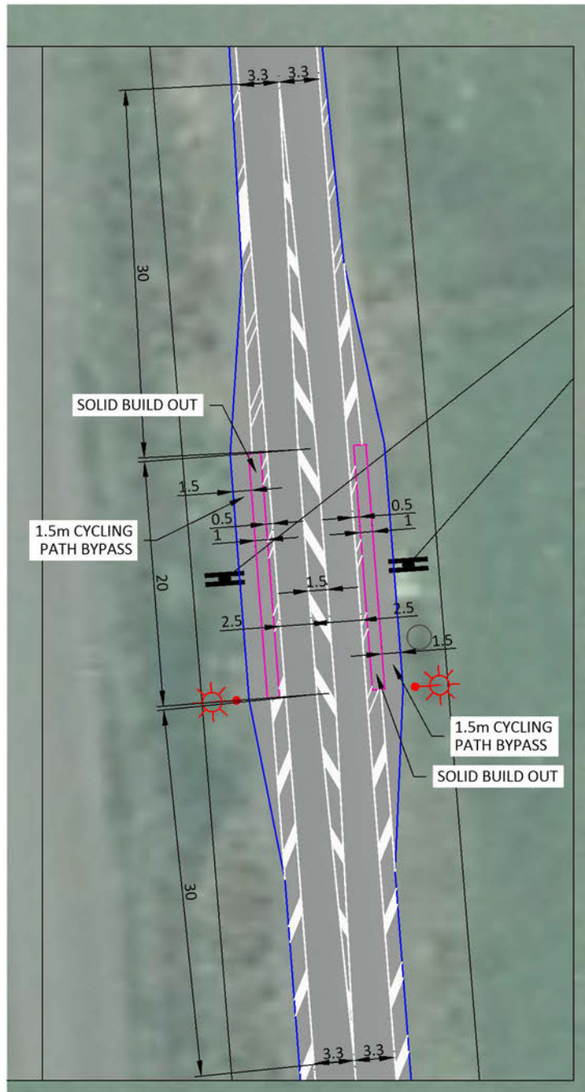
BLOXAM BURNETT & OLLIVER

CLIENT: AMBURY PROPERTIES LIMITED

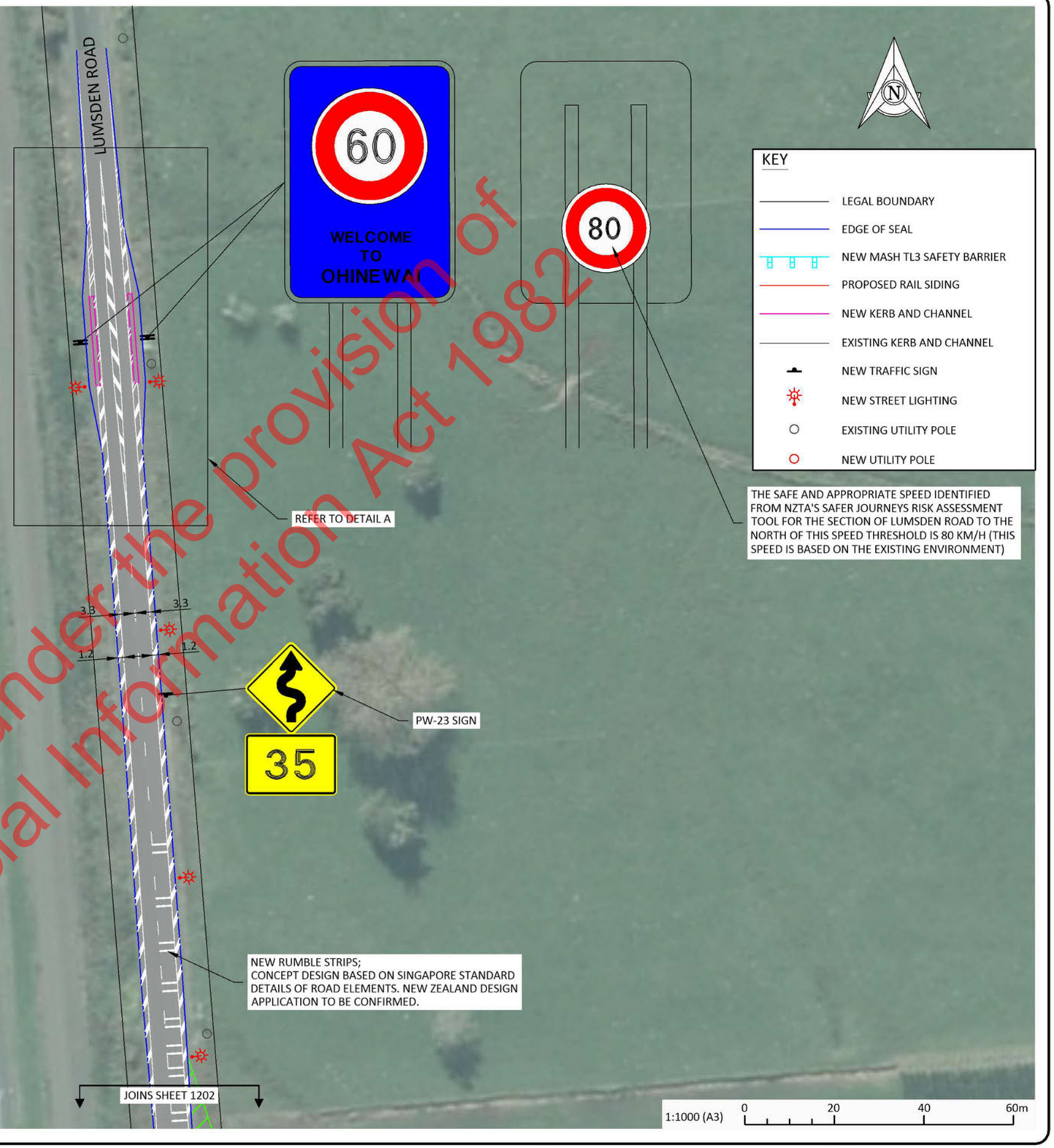
PROJECT: OHINEWAI STRUCTURE PLAN
SLEEPYHEAD ESTATE REZONING

DRAWING: LUMSDEN ROAD RE-ALIGNMENT
OVERALL PLAN

STATUS: PRELIMINARY
DATE: 01/04/2020
SCALE (ORIGINAL SIZE A3): AS SHOWN
DRAWING NUMBER: 145860-06-1200
REVISION: B



DETAIL A
SCALE 1:500



N

KEY

- LEGAL BOUNDARY
- EDGE OF SEAL
- NEW MASH TL3 SAFETY BARRIER
- PROPOSED RAIL SIDING
- NEW KERB AND CHANNEL
- EXISTING KERB AND CHANNEL
- NEW TRAFFIC SIGN
- NEW STREET LIGHTING
- EXISTING UTILITY POLE
- NEW UTILITY POLE

THE SAFE AND APPROPRIATE SPEED IDENTIFIED FROM NZTA'S SAFER JOURNEYS RISK ASSESSMENT TOOL FOR THE SECTION OF LUMSDEN ROAD TO THE NORTH OF THIS SPEED THRESHOLD IS 80 KM/H (THIS SPEED IS BASED ON THE EXISTING ENVIRONMENT)

DATE	ISSUE/REVISION DETAIL	BY	CHK	APPR
B 08/05/2020	SAFETY AUDIT RESPONSE	SB	RB	CI
A 01/04/2020	FOR INFORMATION	SB	RB	CI

DESIGNED: SB | CHECKED: RB | DRAWN: SB | APPROVED: CI | mx model version:

BLOXAM BURNETT & OLLIVER

CLIENT: AMBURY PROPERTIES LIMITED

PROJECT: OHINEWAI STRUCTURE PLAN
SLEEPYHEAD ESTATE REZONING

DRAWING: LUMSDEN ROAD RE-ALIGNMENT
GENERAL ARRANGEMENT PLAN

STATUS: PRELIMINARY
DATE: 01/04/2020 | SCALE (ORIGINAL SIZE A3): 1:1000
DRAWING NUMBER: 145860-06-1201 | REVISION: B

JOINS SHEET 1201

NEW RUMBLE STRIPS;
CONCEPT DESIGN BASED ON SINGAPORE STANDARD DETAILS OF ROAD ELEMENTS. NEW ZEALAND DESIGN APPLICATION TO BE CONFIRMED.

SAFE INTERSECTION SIGHT DISTANCE = 151m
HATCHED AREA TO BE CLEAR OF OBSTRUCTIONS FOR DRIVER SIGHTLINES.

EXISTING UTILITY POLE TO BE REMOVED.
NEW UTILITY POLE TO BE INSTALLED BEHIND SEALED SURFACE.

R160
DESIGN SPEED = 70 KM/H

PW-57 SIGN

PW-67 SIGN

SEALED SURFACE

BALEMI ROAD

R22

APPROACH SIGHT DISTANCE = 92m
HATCHED AREA TO BE CLEAR OF OBSTRUCTIONS FOR DRIVER SIGHTLINES.

R30

R22

GIVE WAY

PW-66 SIGN

42

35

35

42m STRAIGHT SECTION.
ALIGNMENT DESIGNED IN ACCORDANCE WITH TRANSIT STATE HIGHWAY GEOMETRIC DESIGN MANUAL

R50
DESIGN SPEED = 40 KM/H

SAFE INTERSECTION SIGHT DISTANCE = 73m
HATCHED AREA TO BE CLEAR OF OBSTRUCTIONS FOR DRIVER SIGHTLINES.

3.5
1
3.5
1

70°

SH1

NIMTR

EXISTING LUMSDEN ROAD

LUMSDEN ROAD

APL INDUSTRIAL SITE

APL INDUSTRIAL SITE BOUNDARY

RAILS FLASHING LIGHTS AND BELLS, AND HALF-ARM BARRIERS

RAILS FLASHING LIGHTS AND BELLS, AND HALF-ARM BARRIERS

APL FACTORY SITE

JOINS SHEET 1203

KEY

- LEGAL BOUNDARY
- EDGE OF SEAL
- NEW MASH TL3 SAFETY BARRIER
- PROPOSED RAIL SIDING
- NEW KERB AND CHANNEL
- EXISTING KERB AND CHANNEL
- NEW TRAFFIC SIGN
- NEW STREET LIGHTING
- EXISTING UTILITY POLE
- NEW UTILITY POLE

1:1000 (A3) 0 20 40 60m

	DATE	ISSUE/REVISION DETAIL	BY	CHK	APPR
B	08/05/2020	SAFETY AUDIT RESPONSE	SB	RB	CI
A	01/04/2020	FOR INFORMATION	SB	RB	CI

mx model version:

DESIGNED: SB | CHECKED: RB | DRAWN: SB | APPROVED: CI

BLOXAM BURNETT & OLLIVER

CLIENT: AMBURY PROPERTIES LIMITED

PROJECT: OHINEWAI STRUCTURE PLAN
SLEEPYHEAD ESTATE REZONING

DRAWING: LUMSDEN ROAD RE-ALIGNMENT
GENERAL ARRANGEMENT PLAN

STATUS: PRELIMINARY
DATE: 01/04/2020
SCALE (ORIGINAL SIZE A3): 1:1000
DRAWING NUMBER: 145860-06-1202
REVISION: B

B	08/05/2020	SAFETY AUDIT RESPONSE	SB	RB	CI	
A	01/04/2020	FOR INFORMATION	SB	RB	CI	
	DATE	ISSUE/REVISION DETAIL	BY	CHK	APPR	

DESIGNED: SB | CHECKED: RB | DRAWN: SB | APPROVED: CI | mx model version:

BLOXAM BURNETT & OLLIVER

CLIENT: AMBURY PROPERTIES LIMITED

PROJECT: OHINEWAI STRUCTURE PLAN
SLEEPYHEAD ESTATE REZONING

DRAWING: LUMSDEN ROAD RE-ALIGNMENT
GENERAL ARRANGEMENT PLAN

STATUS: PRELIMINARY
DATE: 01/04/2020 | SCALE (ORIGINAL SIZE A3): 1:1000
DRAWING NUMBER: 145860-06-1203 | REVISION: B