BRIEFING SHEET **DRAFT COPY 2026**

Client Brief Job#	**Willows**

Phylogeny

Client Name:	**Matuku Link**	or type new:	**in representation of Bethells Wetland**

Te whakahaere ana i ngā rohe kōreporepo māori ki uta

The Client has undertaken the following conditions with Phylogeny on	01/12/2024

Adjoining Landowners:

Are any adjoining Land owners affected?	YES ☑	Have they been notified?	YES ☑
	NO ☐		NO ☐

Notified by who?	Land owner ☐	Client	**Matuku Link** ☑
	Pilot ☐		

How have they been notified?	In person ☑	Via Email ☑
	Via Telephone ☑	Mailbox drop ☐

Community meeting, emails, phone calls and personal visits

Names and Issues of affected neighbours:

Name:	Bethells Wetland Community see file for list of parties and permissions granted attached.
Issue:	

LAND OWNER OCCUPIER BRIEFING Phylogeny

Danger to Neighbours?	YES ☑ / NO ☐
Any drift issues on target property, sensitive vegetation, stock, beehives or waterways to be aware of?	YES ☑ / NO ☐
Other hazardous operations?	YES ☑ / NO ☐

Details: Military operational airspace. Low level flying, unannounced flights occuring.

Drone spraying has risks of: Spray drift to non target area, drone could lose contact and fly away, drone could crash. Drone could contact wildlife birds. expected to be in the vicinity.

Birds, reptiles,frogs and invertebrates will be in the area, some close proximity of the drone and some contact of spray will be possible.

Wasps, large amounts of wasps are noted and human contact will be possible.

Possible human incursion into the spray zone.

A Safety Risk Assessment Form is attached for details of mitigation.

ANY OVERHEAD WIRES?	YES	☑	NO	☐

THEIR LOCATION **TBA**

Sensitive Areas	
Sensitive Areas – Mark on map below (description and location of neighbouring crops /schools / houses / roads – especially those used by children such as school bus routes)	**Factors to consider before spraying and Measures to be used to avoid contamination of sensitive areas.** (eg: low drift/Controlled Droplet Application nozzles, no-spray buffer zones, favourable wind direction, school holidays)
Activity and process	**Controls**
1/ To, Drone spray where safe to do so for the control of the invasive Crack Willow (Salix x fragilis) to protect the wetland of Bethells Matuku Link as per attached maps, secondary information attached.	1/a: Spray will **not** be applied Onto or Into Water in accordance with the HSNO act 1996. Spray will be applied to the willow foliage and spraying will cease over water. /b: All flight activity will be in accordance with the **Civil Aviation Act 1990.** /c: All activities will be in accordance with the **NZS 8409: 2021 Management of Agrichemicals.** /d: Application in accordance with Council requirements. /e: Application in accordance with EPA active component list of acceptable herbicides that can be applied over water when under control of a qualified person.
2/ Drone spraying of Glyphosate over crack willow in the wetlands for control of population. Factors for application: Drone application is accurate, low level and follows previous detailed mapping of the willow population, extent and instance of willow, other areas of non willow, namely partially or wholly obscured native pockets and vestiges of indigenous flora. Very little drift will occur due to management procedures. Bird counts and nest will be checked to ensure all fledgling has finished and resident populations are able to move away from the drone spraying.	2/a: Certificate of compliance under section 139 of the RMA 1991 has been issued for the activity. Extent of wetland described as 129-175 Bethells Road Waitakere as shown on aerial attached. /b: Phylogeny's Chief Pilot is Part 102 Certified. Phylogeny's Chief Pilot Has current Pilots Chemical rating, and is a qualified person to apply herbicides over or near waterways. /c: Herbicide selection ensure labels are in accordance with activity, see below. Dilution rates are per Label recommendations, at no time will concentrate chemical be over, in or immediately beside waterways.

	/d: Small batches of herbicide will be mixed in separate tank to reduce any left over chemical and for small volume >200L amounts for safety. Seasonal application is chosen to be applied from December to April when the wetland water level is at its lowest, therefore reducing water exposure from any potential drift. /e: Equipment is fully certified and has current compliance certificates and complies with all **CAA regulations and rules**. /f: Wind will be measured by an Anemometer during all spraying activities. Data is recorded via an app and included in Daily Spray Diary. Anemometer is set up at LZ before spraying commences and a reading is taken approx. hourly. In accordance with Pilots CAA certification. DJI Agras T50 has maximum operational wind speed 21.6 km/h /g: CDA nozzles (Controlled Droplet Application. ultra-low volume spray, drastically reduce drift, water usage & chemical runoff) , or a droplet that is Medium 32 drops per cm to Coarse 35 drops per cm. or 200 - 300Mu.with maximum drift of 1 m with air velocity of 5kph. and height at application of between 1m to 3m.
Aquakynde after discussion with EPA and Auckland City Council representative. **D-Glucopyranose, oligomeric, decyl octyl glycosides (CAS 68515-73-1)** (Aquakynde) is a non-ionic Wetter Spreader surfactant to enhance spreading and retention of pesticide sprays. For use in situations where low aquatic toxicity is required. Made from naturally derived raw materials. Avoid contaminating waterways with **concentrate** and empty containers. At typical use concentrations, toxic dose effects will be low and will drop below toxic threshold. Product is readily biodegradable. (ref: NZ NOVACHEM AGRICHEMCAL MANUAL)	/h: Addition of adjuvant Aquakynde will both assist with target accuracy through droplet coagulation, droplet spread and reduced surface tension in addition to positive charge molecular difference, Droplets will spread and dry quickly and become rainfast within 30 minutes. /i: Drone nozzles can be turned off or paused to accurately apply herbicide to **target** areas. /j: Landing Zones are on private land, will be marked on map and will be GPS positioned for accurate position and identification if anything were to go wrong ie: spills "Warning Spraying in Progress" signs are placed during set up of LZ. At Vehicle and ANY Access point to the spray site. Orange Road cones & Retractable belt barrier / tape to stop any unauthorised person entering into LZ. Spotter to confirm no unauthorised people accessing area: if they do spraying must STOP All signage is removed AFTER the spray day has been completed.

	/k: A Spill tray will be used to both protect the ground from contamination and to collect any minor drips that may occur when re supplying the drone with herbicide. /l: Bunding system is on board as is a spill kit in case of emergency. LZ are selected to ensure that if a spill did occur the chemical can be intercepted before entering a waterway. /m: Spotter persons will be positioned around the spray site to ensure and confirm spray accuracy, spray delivery to target, to ensure no unauthorised persons can enter the application zone, and to be recovery persons if in the unlikely case the drone has failure and lands.
3/ Craft possible contact with water/ emergency landing.	3/a: A floating pontoon has been provided to assist with viewpoints for a spotter and also to be an emergency landing platform for the drone. /b: The drone has built in redundancy to allow for emergency landing if a motor should fail. /c: Flotation devices have been affixed to the drone should an emergency landing be required in water, the unit is completely contained and will not spill contents unless a catastrophic accident were to occur. /d: With strict maintenance regime and annual certification process this possibility has been reduced to an almost negligible level. However recovery and reduction of harm strategy is in place to retrieve with kayaks asap.
4/ Communication	4/a: Starlink will provide real time mapping services, mobile phone VOIP service, comms to outside people. /b: Radio Telephones will be issued to all key staff to maintain comms and feedback on progress and confirmation of position, also onsite minor weather variances.
5/ Signal strength (Dual band ensures strong coverage)	5/a: A Relay system will be used to maintain a high signal strength to the drone and navigation systems. RTK (real time kinematic) a GPS correction method that uses a base station to provide real time corrections to a moving receiver.
6/ Other drones intruding into NOTAM area, possible malicious intent.	6/a: Spotters will maintain constant visual scan for other UAS or manned flights, protocols will be followed. In case of malicious disruption all craft will land, Police and CAA notified.

Chemical

Who is supplying the chemical to be used?	**PHYLOGENY** ☑ **CLIENT** ☐
Please note if we use Client chemical and seals are broken or it has expired or is incorrectly labelled, Phylogeny has no liability in regards to these things.	**You confirm that you understand and are responsible for withholding periods and understand the toxic nature to stock and sprayed plants.**
CHEMICAL	**APPLICATION RATE PER HECTARE**
Polaris 450 Glyphosate	**9 - 12 Litres per Ha.**
AntiFoam 1410	**20ml/100L**
Blue FIL done that marker dye.	**300ml/100L**
Aquakynde	**.6L/100L**

Water rate per hectare	**150/200L per**
100 L per ha. up to 230 L / ha.	**Diluted suitable rate for application.**

Have Target Area(s) been identified?	YES ☑

Describe target(s) and their proximity etc:
Willow trees as per aerial plans, supplied by Phylogeny and modified by Auckland City Council with consented activity.

Land Owner and Pilot completed a recce of the target area on :			
Land Owner and Pilot completed an assessment of the target area on multiple and on going occasions.			
I, Matuku Link, as Kaitiaki of Bethells Wetland representing multiple landowner / occupier or their legal agent. I certify that the above is correct and that I am satisfied that I have detailed all extraordinary hazards and other details as specified above to Phylogeny. I give permission for Phylogeny and its personnel to have access and work on the property.			
Designation Owner:		**Signature:**	
		Date:	

MAP OF TARGET AREA

Phylogeny